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ABSTRACT

Presented is the first of three reports on taxonomic instruction, which is defined as a method of systematizing strategies and substances of instruction for purposes of diagnostic teaching. The target population is a group of behaviorally disordered, underachieving boys, aged 10 to 15, and the instructional content is reading, which is divided into basic skills, basic subskills, and sequential levels. The unit on taxonomic instruction explains that the taxonomy model has the following structural organization: instructional content organized logically and sequentially through epistemological analysis; transmission of instructional stimuli through any of pupil's receptive sensory modalities; response elicitation through any of pupil's expressive channels of communication; and mastery of total range of instructional modes and methods available. Five basic skills related to reading are coded as cognitive perceptual, language analysis, comprehension, study skills, and aesthetic expression. Lengthy instructional materials on reading are included for each basic skill. Also included are simulated experiences of a taxonomic inservice teacher education project in the form of 36 facsimiles of various project transparencies, which are intended as a guideline for taxonomic instruction. (See also EC 040 217 and EC 040 218.) (CB)

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First Report

Project No. 7-1295
Project No. 422273
Grant No. OEG-1-6-062528-2093
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THE TAXONOMIC INSTRUCTION PROJECT

A Manual of Principles and Practices Pertaining to the Content of Instruction

December, 1969

EC 040 216

Research and Demonstration Center
for the Education of Handicapped Children
Teachers College, Columbia University
New York, New York

United States Department of
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FIRST REPORT

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THE TAXONOMIC INSTRUCTION PROJECT

Project Director,
Abraham J. Tannenbaum

A Manual of Principles and Practices Pertaining to the Content of Instruction

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Research and Demonstration Center
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December, 1969

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FOREWORD

The Taxonomic Instruction Project is dedicated to the individuality of the human being. It is individualization.

The Taxonomic Instruction Project is committed to the personal integrity of every individual child. It is personalization.

The Taxonomic Instruction Project is a statement of problems and a quest for solutions. It is a project with a faith in teachers and the possibilities they have to improvise upon their strengths and to create flexibility out of their insights into themselves. It is a project with a belief in children, in their needs, in their potentials, in their strengths, and in their weaknesses. It is a project with a respect for the appropriate uses of materials.

The Taxonomic Instruction Project would not be possible without people, without their intellects, without their selfless service to others. Such people are held by me in profound affection and respect. They include: Dr. Leonard S. Blackman, Director of the Research and Demonstration Center, Dr. Frances P. Connor, Chairman of the Department of Special Education, Dr. Abraham J. Tannenbaum, Director of the Project, Mrs. Tania Willis and Mrs. Pauline Mortensen of the Research and Demonstration Center, and the staff who helped me develop the theoretical model into its implementation. This staff acted as researchers, as developers, as trainers, as teachers, but above all, they acted as friends and as colleagues. They are: Mrs. Shirley Goldwater, my right hand and my left one, too, Mrs. Jill Aubry, Mr. Joseph Brodack, Mrs. Teresa Carr, Mrs. Deborah Schanzer, and Mr. Patrick Schifano. We welcome the addition to our staff of Mrs. Nancy Dworkin and Mr. Jerry Jorgenson for the school year 1969-1970.

As well, my thanks must go to Mrs. Heddy Schlackman for her efficient secretarial assistance, to Mrs. Patricia Schifano for her most clarifying art work, to Mrs. Helen J. Hiltner, Editorial Director of the Research and Demonstration Center, who helped so gallantly in bringing this manual into being, and to Mr. Paul Ackerman, who began as our researcher and became our friend.

It is our hope that this manual of instruction will act as an agent that provokes, that stimulates, that inspires. Above all, it is our intention that this manual be a direction toward the excitement of possibilities and probabilities that become realities for all who read it and for all those children who might be reached because of it.

Sandford Reichart
Associate Director

BOARD OF EDUCATION OF THE CITY OF NEW YORK

P. S. #9 — SCHOOL
Maspeth, Queens — BOROUGH ZONE
58-74 - 57 Street — ADDRESS
GL. 6-7105 — TELEPHONE

OFFICE OF THE PRINCIPAL

Dr. Sandford Reichart, Associate Director
Taxonomic Teaching Project
Research and Demonstration Center
Teachers College, Columbia University

Dear Dr. Reichart:

I should like to convey some personal observations with regard to the Taxonomic Teaching Project that we were so fortunate to have at P. S. 9, Maspeth, Queens, this year.

First, let me say that we had the most inauspicious beginning that fate could ever bestow on any school. We began after a bitter strike that had not only convulsed a city, but had also split our faculty along ideological and racial lines. Teachers who had been eager to work for change in September were professionally numb in December.

A cliche that has been used facetiously about Board of Education experiments has been that they are doomed to success. Our experiment, because of factors beyond our control, appeared to be doomed to failure, although I would not admit this to anyone at the time. Now, let us look at what I think has happened five months later.

The teachers who were most closely associated with the project voiced their enthusiastic approval at a recent faculty conference. Mr. Schoenberg referred to it as a reading resource pharmacy wherein the teacher writes the prescription and promptly has it filled. He added that every special school should have this facility. Mr. Duncanson teaches a seventh grade class whose students are approximately four years retarded in reading, and said that "they made promises and delivered all of them." He felt that he was immeasurably assisted by the variety of materials and strategies provided which enabled him to reinforce identical skills on different days in varying contexts. He felt that the assistance he received helped him to sustain a high degree of interest in reading activities. Mr. Duncanson also commented on the excellent opportunity given to him to discuss common observations about children and methods with Mrs. Aubry. As a result of these informal conferences, adjustments to fulfill needs were quickly made. Mr. Duncanson also indicated that he had benefited as the result of acquiring many imaginative ideas in presenting and manipulating materials. Mr. Lighty, a beginning eighth grade teacher whose boys are retarded from four to six years in reading, was elated about the motivation inherent in the multitude of materials and styles that are made available. He added that "most of the technology looks beautiful, but it means nothing if you don't know what to do with it." He stressed the teacher trining implications, since Mrs. Schanzer was available to him for demonstrating and trouble shooting. He, too, was impressed with the variety of materials. In addition, Mr. Lighty felt that the presence of an additional knowledgeable professional enabled him to provide for a greater degree of individualization for the children and extended the possibilities of professional improvement for himself.

The children, too, have expressed their enthusiasm about the project. They feel they are being helped and have informed me that they are receiving a great deal of individual help. All of the boys expressed enthusiasm for the opportunity to use different materials and technology.

I am embarrassed to state that subjectively I can find nothing but enthusiasm about the project. Perhaps it is because of the Goldwater (not Barry) team that came to implement it. I can see possibilities for disaster with the wrong people at the right place. I should like to add that beyond the benefits to the children both experienced and inexperienced teachers have benefited. The R and D team has done an outstanding job of motivating the motivators. In a setting where there is such a serious degree of retardation, I am concerned not only with instilling hope in children, but also in keeping the faith with teachers.

In closing, I do not know what the statistical pre- and post-test results will indicate, but subjectively I can offer nothing but raves about the program.

Sincerely,

Albert Budnick

Albert Budnick
Principal, P. S. 9

INTRODUCTION

This is the first of a series of reports on Taxonomic Instruction, a method of systematizing the substances and strategies of instruction for handicapped children. The target population in this study is a group of behaviorally disordered, educationally retarded boys, age 10 to 15, whose violently aggressive habits have led to their dismissal from regular New York City Public Schools and their absorption in one of the so-called "600" special schools conducted by that City's Board of Education.

The Taxonomy delimits its concern to the instructional aspects of teaching, specifically the pupil's engagement in absorbing adaptive basic skills and concepts. Teaching, on the other hand, embraces the *total* spectrum of teacher-pupil behavioral transactions, which includes not only the instructional processes as defined here, but also the cultivation of supportive, ego-building interpersonal relationships, the evocation of productive intellective processes, and the development of reward and feedback mechanisms for behavior control. A fundamental hypothesis being tested by the project is that the teacher's ability to regulate a pupil's engagement – or his responsiveness and attentionality to instructional stimuli – in the learning experience has both therapeutic and scholastic value. It is further hypothesized that for each pupil there is a unique set of tactics best suited to control his engagement at a given moment in time. The teacher's instructional role is to achieve "a goodness of fit" between the pupil's functional capacity and preferred learning style on the one hand and the organization of content and strategy for instructional transmission on the other. Attainment of the proper match is defined here as individualized instruction. However, the ultimate goal is to move the pupil from individualized to personalized instruction in which engagement control is maintained even through hitherto unfavored tactics. In other words, individualization implies the location of the best "wavelength" between transmitter (teacher) and receiver (pupil) while personalization involves the improvement of reception on an increasing number of wavelengths.

The two step process – toward individualization and then toward personalization – is facilitated by the Taxonomy of Instructional Treatments, an operative model of the kaleidoscope of instructional behaviors. Such a model is needed not only because it attempts to define the parameters of the teacher's instructional role; it is useful also as an aid to information processing as the teacher plans for instruction. If a particular pupil's engagement is most effectively aroused by a given combination of instructional content, communication channels for receiving and transmitting messages, and strategies for performing the instructional act, the teacher should have mastery of a large array of possible alternative combinations before processing them for the appropriate one to be successful, or even meaningful. Thus, for example, the teacher whose instructional mode is restricted to lecturing and test-response dialogue is not likely to penetrate most successfully to the pupil who prefers his stimuli "packaged" in puzzles or games. Information processing is a delicate, complicated task for the teacher when all of the relevant "bits" are available. When they are not, the task is an impossible one. The incompetent teacher processes few "bits" because few exist in her repertoire. The highly competent teacher likewise processes few "bits" because the great number of unpromising alternatives are quickly eliminated and the choice is made from the few most appropriate ones.

Some emotionally unstable children are so erratic and unpredictable in their response patterns that no combination of instructional stimuli produces optimal engagement on successive trials. Others are so distractable that no particular stimulus can sustain attention for more than a short period of time. In such instances the teacher has to be adroit enough to shift from one strategy to the next either to achieve or maintain engagement, and this is possible only if his arsenal of strategies is abundant and systematically organized. The Taxonomy is the organizing index to the universe of instructional behaviors. Structurally, it takes into account the teacher's function in (a) organizing instructional content logically and sequentially through some epistemological analysis; (b) transmitting instructional stimuli through any of the pupil's receptive sensory modalities; (c) eliciting responsiveness through any of the pupil's expressive channels of communication; and (d) mastering the total range of instructional modes (or styles) and methods (pupil grouping arrangements) available to be utilized.

As an analytic tool, the Taxonomy provides criteria for assessing the child's learning status and how he interacts with a formal instructional stimulus. It allows the teacher to determine which Basic Skills and related Subskills the child must master; at what difficulty level this content can be learned; the Communications Input that galvanizes maximum reception; the Communications Output that conducts maximum responsiveness; the Instructional Mode that engages attention and fixes interest in the learning task; and the Instructional Method of grouping to provide the most supportive, distraction-free environment for learning.

The Taxonomy also systematizes the teacher's stylistic repertoire by classifying the behavioral alternatives open to him during the instructional act. To make these styles operative, it is necessary to create and assemble instructional materials that will plug appropriate content into every specified teaching style. Once the teacher has determined precisely what skill deficits handicap the child he elects the preferred instructional content and teaching behavior from the array outlined in the taxonomy. He is then guided to the teaching aids that fit his requirement by the Taxonomy Code system which forms the indexing scheme for the materials. The task of the curriculum specialist is to keep the library of instructional aids stocked in such a manner as to fulfill the content and teacher behavior specifications suggested by the Taxonomy. Thus, a diagnosis of individual learning needs is directly applicable to an educational catalog that provides sources of methods and materials to match the diagnosis. Whereas most teachers move from the formal or informal diagnosis of a child's functional capacities to the selection of appropriate instructional materials, the Taxonomy provides them with an intermediate step. After making the diagnosis, the teacher determines appropriate instructional content and strategy and then searches for materials to fit his contentual and strategic requirements. The result is prescriptive teaching and a broad diversification of approaches to instruction.

THE TAXONOMIC MODEL

The only interchangeable part of the Taxonomic Model is content. Any substantive material – scholastic or behavioral – can be plugged in, but it must be organized as a pyramid of successive layers of concepts, each resting on a simpler, more fundamental stratum. The content area chosen for the present study was reading since the target group's retardation was so desperately severe in this vital skill area. After spending at least five years in regular classrooms, most of the children had but the skimpiest knowledge of the alphabet and a sight vocabulary of no greater than that of the first grader at the readiness level. The key for the Taxonomy of Instructional Treatments was therefore organized as follows:

Basic Skills

For the sake of simplicity, five skills related to the act of reading have been generally grouped under the main heading of Basic Skills. They are coded as follows: 1) Cognitive Perceptual 2) Language Analysis 3) Comprehension 4) Study Skills 5) Aesthetic Expression

The Basic Skill areas have been further refined into Basic Subskills. After the teacher has noted the Basic Skill area, she enters the code number of the more specific Subskill that has to be taught.

The respective Basic Skills are coded as follows:

Basic Skill 1 – Cognitive-Perceptual

Basic Subskills

1) Symbolic Discrimination; 2) Memory Span; 3) Directionality-Laterality; 4) Time Relationships; 5) Space Relationships

Basic Skill 2 – Language Analysis

Basic Subskills

1) Consonants; 2) Vowels; 3) Sight Vocabulary; 4) Word Structure; 5) Syntax

Basic Skill 3 – Comprehension

Basic Subskills

1) Main Ideas; 2) Details; 3) Sequence-Relationships; 4) Word Meaning; 5) Context Inference; 6) Critical Analysis; 7) Recreational Reading

Basic Skill 4 – Study Skills

Basic Subskills

1) Skimming; 2) Dictionary; 3) References and Texts; 4) Maps, Graphs, and Tables; 5) Speed and Accuracy; 6) Other Sources and Processes

Basic Skill 5– Aesthetic Expression

Basic Subskills

1) Creation; 2) Interpretation; 3) Reception

Sequence Levels

The Sequential Levels notation is an attempt to categorize materials according to degrees of difficulty for the particular target population being treated. The coding is as follows: 1) Grades 2 and below; 2) Grades 2-4; 3) Grades 4-6; 4) Grades 6 and above; 5) Ungradable; 6) Multilevel.

Instructional Methods

Instructional Methods refer to the ways of organizing pupils for a formal teaching-learning experience. The coding is as follows: 1) Teacher-Total Group; 2) Teacher-Small Group; 3) Teacher-Student; 4) Student-Total Group; 5) Student-Small Group; 6) Student-Student; 7) Individual Self-Instruction.

Instructional Modes

Instructional Modes are the transactional styles between the learner and the teaching stimulus. They are coded as follows: 1) Place-Chance; 2) Play-Competition; 3) Play-Puzzle; 4) Test-Response; 5) Exploration; 6) Programmed Response; 7) Problem Solving.

Communication Input

Communication Input refers to the learner's sensory modalities available for mediating the instructional stimuli. The coding is as follows: 1) Visual; 2) Auditory; 3) Kinesthetic; 4) Auditory-Visual; 5) Visual-Kinesthetic; 6) Auditory-Kinesthetic; 7) Visual-Auditory-Kinesthetic.

Communication Output

Communication Output refers to the channels to be used by the student to demonstrate the correctness of processing information received by the input channel. The coding is as follows: 1) No Response; 2) Oral Response; 3) Motoric Response; 4) Oral-Motoric Response.

The Taxonomic Instruction Chart

As outlined in the Taxonomy Model, the teacher makes seven decisions in planning for instruction: three for Content (Basic Skills, Subskills, and level of difficulty) and four for Strategy (Instructional Method, Instructional Mode, Communication Input, Communication Output). The model itemizes and codes all of the alternatives available to him in making each of these seven decisions. By placing his selected code number in the appropriate cells of the Diagnostic Analysis Chart that is available for the teacher's use, he reveals his instructional plan for a given child, subgroup, or total group.

DIAGNOSTIC ANALYSIS CHART

Name(s) Tom Smith Age(s) 11-5 D.O.B. 6-15-55

School P.S. 148 Class 6-2 D.O.T. 9-30-66

	Content 1	Content 2	Content 3	Content 4	Content 5
A. Basic Skills	1	1	1		
B. Subskills	2	5	3		
C. Sequential Levels	1	1	1		
D. Communications Input	7	7	7		
E. Communications Output	2	2	2		
F. Instructional Media	1,2,3,4,5	1,2,3,4,5	1,3,5		
G. Instructional Modes	1,2,3,4	1,2,3,4	1,2,3,4		
H. Instructional Methods	2,7	2,7	2,7		

HOW THE TAXONOMY WORKS

As indicated earlier, each variable in the Taxonomy Model is coded and designed for teaching reading, but it can be adapted to other content as well. In the first major use of the Taxonomy (i.e. diagnosis) test data on an individual child can be coded on the chart. For example, pupil A may have a language analysis problem (Basic Skill 2), specifically in sight vocabulary (Subskill 3). He can handle easy primary grade material (Sequential Level 1) and is responsive to visual, auditory, and kinesthetic inputs (Communications Input 1, 2, and 3 and any combination thereof). He is comfortable in making oral responses (Communications Output 2), his interest is aroused by such teacher tactics as games of chance or puzzle play (Instructional Modes 1 and 3), and feels most comfortable in a teacher-directed small group or engaged in self-directed activity (Instructional Methods 2 and 7). In designing an appropriate match between diagnosis and treatment, the teacher can organize his instructional materials through a similar coding system and make his plans accordingly. Eventually, the entire process can be automated to simplify the diagnostic process, the components of instruction, and the retrieval system as the instructional materials library grows.

The first aim of the taxonomic scheme is to implement individualized, diagnostic, prescriptive instruction. It gives the average classroom teacher specific guidelines for diagnosing learning needs and styles and for analyzing instructional materials and methods. The teachers are forced to observe the structures and functions of instructional behaviors and to understand more clearly what professional "armament" they bring into the classroom. The Taxonomy is also a convenient method of analyzing the current state of the educational materials market. The catalogue can reveal the gaps and the overabundance in strategies presently on the market and provide guidelines for filling these gaps. This has been a major task of the project staff.

A number of strategies have developed over the past year involving the creation, adaptation, and utilization of alternative approaches to instruction. The target population is, for the most part, virtually illiterate, having entered the special school after a long history of educational failure, with all the attendant hostility toward school and low self-estimates. The pupils could not build a productive learning relationship with teachers nor have they ever seen the educational milieu as an environment in which they show to best advantage. The first task, therefore, is to obtain an inventory of *learned* skills and to utilize this information as instructional content in order to help the pupils to build an inventory of successful learning experiences, perhaps for the first time in their schooling. The Taxonomy offers a wide range of possible strategies that can be used even within a narrow range of contentual options.

Measuring skill deficits and strengths is a far more precise task than diagnosing appropriate channels of communication, instructional modes, and methods. The project staff developed several diagnostic reading measures to fit the special needs of the target group and to supplement the familiar published instruments. But in observing the pupil during the testing session, the teacher also formulates hypotheses about his behavior and translates them into the Taxonomy's code system. The project staff has felt that guidelines for observing behaviors are the key to helping teachers diagnose pupils' needs. This means that the teacher's judgments about input and output channels and the best modes and methods for instruction are critical in the planning process. Experience in the project shows that the Taxonomy helps regular classroom teachers focus more systematically on key behavior patterns among pupils as a means of determining most appropriate treatment strategies. An ongoing objective is to make the taxonomy-based diagnostic procedures ever more error-free.

Perhaps the most important use of the Taxonomy has been as a tool for lesson planning. The teacher enters one or more of seven digit code numbers on the Taxonomy Chart, thereby indicating *what* he is going to teach and *how* he plans to do it. It is the job of the project's staff to fulfill the teacher's requirement by creating, assembling, and supplying him with the instructional aids that fit the treatment plan. The plan can be made for individuals or groups, and each pupil can have a cumulative record of the instructional treatments to which he will have been exposed over a period of time. This facilitates a more systematic evaluation of the program when it reaches the terminal point.

This first report, made during the year that the project director was on leave to fulfill an assignment abroad was written by associate director Sandford Reichart, acting project director in 1968-1969, by Shirley Goldwater and the project staff, Jill Aubry, Joseph Brodack, Teresa Carr, Deborah Schanzer and Patrick Schifano. The report reflects the thrust of the 1968-1969 year of implementation of the Taxonomy. It is a realistic account of how the staff went about training classroom teachers in the utilization of the Taxonomy for improving instruction. It carries a practical message for all future training programs by elaborating on the methods that worked and touching on those that are less promising. The product presented in this volume is an elaboration of the contentual aspect of the Taxonomy. An elaboration of the index of strategies is left for a subsequent report. Also to be reported in forthcoming documents are the elaborate conceptual framework for the Taxonomy, a series of clinical studies that derive from the taxonomic scheme, an evaluation of the Taxonomy as tested in the experimental setting, and a methodology for translating the Taxonomy from laboratory experimentation to educational policy and practice.

Abraham J. Tannenbaum
Project Director

THE TAXONOMIC INSTRUCTION

PROJECT MANUAL

UNIT I CHAPTER 1

THE HISTORY OF THE TAXONOMIC INSTRUCTION PROJECT

In due course, historians will probably describe the year 1968 by a variety of appropriate titles – The Year of Assassinations, The Year of The Great Conglomerates, The Year of Racial Divisiveness, or The Year of The Fall of The Goddess. But in all probability, New Yorkers will remember this year as The Year of The Great Teachers' Strike. An eleven-day teachers' strike in 1967 had preceded the Autumn 1968 strike of eleven weeks.

The practice of characterizing a period in terms of rubrics is a superficial means of analysis. It implies that the effects of an event are felt in the same way, and to the same degree by all people exposed to the event. This, of course, is not true. Individual differences exist and flourish in the context of an all-encompassing event.

For all of the people of the city, the 1968 strike had generated tensions. For some of the people of the city, the strike had so disrupted their lives that they temporarily became immobilized. For others only minor changes occurred, some of which may not have been altogether unpleasant: for a small group of educators, six in number, the period of the strike yielded a most rewarding yet painful experience. For them the eleven weeks provided the time to go on a journey. It was a journey through time rather than through space, in which the research staff of the Taxonomic Instruction Project tried to assess the competency of their work in the past and struggled to clarify issues in order to increase their competency in the future. The strike, for them, was an intellectual hiatus of professional evaluation. The experience was not a purely pleasurable one. Self-evaluation can be an agonizing process, but if done with integrity, it can be an enormously rewarding process as well. This is the account of that journey made by the six research staff members of The Taxonomic Instruction Project, formerly The Self-Instruction Reading Project of The Research and Demonstration Center for the Education of Handicapped Children, Teachers College, Columbia University.

The Project was the offspring of the union of Teachers College and the Board of Education of the City of New York at P.S. 148, Manhattan, a fifth to eighth grade school for emotionally disturbed, socially maladjusted boys who are judged uncontainable in regular classrooms. Special schools of this type have been subjected to public and professional criticism. Their purposes (the development of student mental health and the subsequent re-absorption of the student into the educational mainstream), the methods by which to accomplish their purposes, and the effectiveness of their methods became the foci of professional scrutiny. It was felt that innovative techniques and materials were required to suffuse vitality throughout the special schools' system. This quickening process was the task assigned to the research staff of The Self-Instruction Reading Project by the project director, and was to begin with P.S. 148, Manhattan, in the school year of 1966-1967.

P.S. 148 provided an almost perfect setting for the project. Administratively, the school was unique. It was the only special public school of its kind that had a departmentalized organization. It had had only a year of life as a special school. The backlog of traditional materials had been discarded by the administration as inappropriate for the school's goals for the children but an educational process had not as yet evolved. Developmentally the school felt itself to be in somewhat of an educational void and the school's administration welcomed the research staff to further the development of educational resources and processes.

In September of 1966, two members of the research staff established an office on the third floor of P.S. 148, and good relations were generated from the first moment of contact. The three language arts teachers of P.S. 148 involved in the project had self-images sufficiently strong to permit them to seek assistance whenever it was needed, and their professionalism enabled them to be flexible in the use of new techniques and materials.

The year 1966-1967 was a very rewarding experience for the members of both the P.S. 148 teaching staff and the R & D Center research staff. They worked together two to three periods a day, making original materials for children, modifying commercial materials, diagnosing children's needs, and exploring new techniques. In the course of the year, the two project staff members who had initially entered the classrooms to observe children, became teachers' aides. They demonstrated techniques and materials within the classroom and tutored children with hard core behavioral problems and serious reading deficiencies. Young graduate students at the Masters degree level from the Special Education Department of Teachers College, gaining their first exposure to an emotionally disturbed, socially maladjusted population, continued the project tutoring phase in the classroom on a scheduled one-to-one basis for thirteen weeks of the year. In essence, the year evolved as a nine-month workshop with everyone becoming active participants, eager to share the work, ideas, knowledge and enthusiasm. It is a joy to look back at the 1966-1967 initial year of the project.

By contrast, the second year of the project, 1967-1968, was a year of trauma. The research staff was expanded to three members while the language arts staff was expanded to six teachers. Now the research staff had under its instructional wings the entire student population, whereas in the preceding year of 1966-1967 only three-fifths of the children had received their services.

The Autumn of the 1967 school year, too, began with unresolved problems that precipitated the first teachers' strike of eleven school days' duration. It was the first time in New York City that teachers chose to use this strategy to gain their ends, and the novelty of the situation brought a full complement of the student body to the school to witness their teachers' performance on the picket line. Initially, the air of the fair grounds pervaded the situation, but the joviality and camaraderie diminished perceptibly as the strike dragged on into the second week. Still the boys of P.S. 148 came doggedly to school. The principal had grave difficulties in supplying instruction to the students without a teaching staff. The research team chose to cross the picket line and to assume the teaching role. Reading instruction was scheduled for all the students during the morning hours.

At the end of the eleven-day teachers' strike, the project was now to unfold, but not in the way it was originally conceived for the previous year, 1966-1967. The director of The Self-Instruction Reading Project had shifted the focus of the project in this second year of 1967-1968, had redefined the role of the research team, and had added a new concept – the taxonomy of instructional treatments. The shift in focus was from the children to the teachers. The research staff was now to be involved in a teacher training project. It was a shift that the team found difficult to make. Basically, the three research staff members are teachers who enjoy working with children, and who meet the difficulties of teaching with spirit and determination to succeed. The new plan was for the staff to remain distant from the children, to have as little contact with them as possible, and to work only with the teachers in the isolation of the project office. The primary task was to make the teachers knowledgeable in the concepts of the taxonomy and facile manipulators of the practical uses to which the taxonomical concepts could be applied.

Taxonomies have been used for the purpose of classification for hundreds of years in other disciplines, and the R & D Center's project was not the first to use such a system in the field of education. Then, what was so startling about the proposal? The project's taxonomy, or classification system, addresses itself to an unusual content – the "what" and "how" of Basic Skills – in this case reading instruction – in direct relationship to the individual child's needs. The first three divisions of the taxonomy are devoted to Basic Reading Skills, the Subskills associated with each of the Basic Skills, and the level of skill competence on which the child may be functioning. This is the "what" of reading instruction. The next four taxonomical divisions present an inventory of instructional strategies: methods of student grouping; modes of instruction; communication channels available for students' reception of information; and communication channels available for students' expression of information. These four divisions of the taxonomy make up the "how" of reading instruction.

Each and every piece of material in the room used as a Resource Center (original, commercial, and/or modified commercial) was to be viewed as a vehicle by which to impart a specific content (the first three divisions of the taxonomy, see Appendix A), using recommended teaching strategies (the last four divisions of the taxonomy, see Appendix A). The content to which the child is exposed depends upon his reading deficiencies as revealed by his scores on standardized and diagnostic reading tests administered early in the school year. The instructional techniques the teacher utilizes for each child are dependent on the amount of observable involvement (or engagement) the child gives to his reading tasks. If the child does not become responsive to the task, alternative content or strategies are explored by the classroom teacher and the research staff in the hope of improving the child's engagement in the learning experience. Since the exploration is initially accomplished through trial and error and then through diagnostic insight, minor adjustments in the taxonomical planning for the child are made until the desired degree of involvement is attained. The goal is to make the child a totally involved participant in the learning process.

The three project staff members began their self-instruction in July of 1967 and continued the process throughout the summer. They met with the project director, who tested their understanding of the taxonomy by asking searching questions. Whenever their responses displayed ineptness or misconception, they sought to clarify the issues. The sequence of the research team's task was to teach themselves the concept of taxonomical instruction and to understand it so well that the knowledge could be transmitted to the classroom teachers with skill and economy of effort. By September of 1967 the staff felt ready for the second phase – to convey their understanding of the project to the six classroom teachers with whom they were to work during the school year of 1967-1968.

To attempt nothing is to avoid failure in anything. Thus, when initiating the new teacher instruction program in P.S. 148, Manhattan, the research staff was faced with the possibility of being incapable of achieving their purpose. That possibility became reality. Six language arts teachers in P.S. 148 were assigned to the project. They came to meetings regularly, listened attentively to the explanations of taxonomical instruction and planning, asked intelligent questions, used the project's materials, created their own materials, became flexible in their reading methods, and individualized their instruction. Despite all these positive assets working favorably, taxonomic instruction and planning remained an abstract, mechanistic process that bore little relationship to the practicalities of classroom life. The teachers tried; the research team tried; but the pall of failure enshrouded the project. The "why" of the failure was not obvious at the time; effort, intent, and sincerity were not equatable with success.

In this journey of self-analysis, September of the 1968-1969 school year was reached – the period of the second teachers' strike which provided eleven weeks for the research team to discover the reason for failure in the preceding school year at P.S. 148. The location of the project had been shifted to P.S. 9, Queens, to provide the research staff with a new but similar population of teachers and students, but along with the teachers, the research staff was locked out of P.S. 9. During the project director's year abroad, weekly in-service training sessions were held by the associate director of the project with the research staff to help discover some of the weaknesses of the staff's approach to and understanding of taxonomic instruction and planning.

It is interesting to note that what evolved from these weekly sessions was a return to the plan of the project as it was in its infancy during the school year of 1966-1967. Taxonomic instruction and planning was to be taught by demonstrations and workshops in the classroom, thereby providing simultaneous instruction for children and teachers.

In 1968-1969 the staff was expanded at P.S. 9. An R & D Center research consultant who was to evaluate the project was added to the staff along with three other staff members who brought their specialized talents of curriculum development, reading remediation and linguistics to the project.

The school year of 1968-1969, then, was the first year of evaluation. The staff is both hopeful and fearful about the results; hopeful that their efforts will affirm the effectiveness of the project, and fearful because of the eleven-week delay in the start of the project. The time for second-guessing and rationalizing inadequacies is past; the time for implementing the project's goals is present. It is hoped that substantial reading gains will be attained by the population and that the teachers' repertoire of instructional strategies will be enriched and enlarged by the project's taxonomic principles and procedures.

UNIT I CHAPTER 2

THE TAXONOMIC INSTRUCTION PROJECT

AN IN-SERVICE TEACHER INSTRUCTION PROGRAM

On a number of occasions in the course of the project's development the staff received somewhat frustrating requests to describe the focus and goals of the current phase of the project in one, or at most three, concise sentences. After the initial sense of outrage passed, an attempt was made to comply with such requests. Interestingly enough, although the staff's efforts sounded awkward and inadequate to both themselves and their audience, in all the responses one common factor prevails. Couched in various descriptive terms, embedded in a number of different contexts, the current emphasis of the project is repeatedly captured by the same words: an in-service teacher instruction program with initial focus on the development of individualized-prescriptive methods for teaching children and the ultimate achievement of personalized instruction.

The staff is no longer apologetic about this thumbnail description. It has not been the reiterative use of the phrase that has overcome their initial sense of inadequacy. Instead they now recognize that to encapsulate the essence of a developing project, its evolving educational principles and practices, is to limit the expression of the dynamics of its growth. Thus the phrase – an in-service teacher instruction program – characterizes the core of the project without citing the forces that shape it.

The project's in-service instruction program has a dual nature. While the staff provides teacher training at the site of the project, it is itself undergoing training conducted by the project directors. The concurrent operation of the two instruction systems generates a cyclic movement with problems originating in the teachers' training sessions providing the gist of discussions in the staff training sessions, from which the means to resolve problems are evolved and demonstrated to the teachers in the classroom. The direction of cause and effect is not always from the teacher instruction program to the staff instruction program, then back again to the source, but is just as often in reverse order. Procedures that are designed in the staff sessions are brought to the teacher sessions for discussion, refinement, and eventual implementation in the classroom. It must be borne in mind that whatever is planned is not considered formalized until its effect upon the children has been ascertained.

CONFERENCE MODELS

The structure of the parallel instruction systems accommodates itself to the use and integration of many different types of conferences. There is, of course, the director/staff conference, previously mentioned, that is the core of the staff training program. At this level, basic issues are raised, extensions of principles and practices are suggested and future goals outlined. Next there is the total intrastaff meeting, scheduled weekly, at which basic policy is refined and methods of implementation and execution are devised. The work of the project at this level is viewed as the product of the staff functioning as a team with each member contributing the unique orientation and talents of his educational specialty. Another type of intrastaff meeting which is initiated whenever the need arises is attended by just a few members of the staff. The need for participation is based on the problem to be resolved. The problem is usually highly specific and requires particular competencies for resolution.

At the core of the teacher instruction program is the interstaff meeting which can take many forms. Usually these meetings, which are scheduled twice weekly involve the participation in a one-to-one relation of teacher and project member (teacher/staff member conference). Occasionally the interstaff meeting requires the involvement of the teacher with more than one member of the staff. It is the scope of the problem that determines the number of project participants at this type of conference.

In some instances the interstaff meeting had the shape of associate director/teacher/staff member. It was the associate director's intention that this kind of meeting, scheduled on a monthly basis, would involve all the members of both staffs, teaching and project. Unfortunately, scheduling problems prohibited the staffs from assembling in this manner. But the importance of this conference model cannot be overestimated for it functions as the channel of communication between the project's policy-makers and the project's implementors. A project's effectiveness is in part, at least, based on the degree of interaction and the quality of the dialogue between these two operative levels. Policy-making designed without reference to the realities and exigencies of the classroom is policy-making designed in a vacuum evolving procedures designed for use in a vacuum. The teachers in their role as implementors of policy require the opportunity to delineate the classroom environment, the classroom population, the problems to be confronted, their relations with the project members, the dangers to their authority image and the degree of their involvement in the development of strategies and content for children. Through the dialogue that evolves in this conference model, the role of the teacher is transformed from implementor of policy to policy-making participant.

Another conference model, teacher/teacher/staff member or the variations effected by increasing the number of participants, was planned but never scheduled because of conflicts in teaching assignments. The staff feels this level of communication, teacher to teacher, would have been extremely productive in broadening the utilization and usage of individualized treatments. In addition, the assemblage of the teachers as a group would have circumvented the time-consuming procedure of demonstrating strategies and materials to individual teachers. And finally, this matrix would have given some of the teachers the opportunity to assist in the training of others less skilled in the taxonomic procedures. It is one of the environments in which the staff can develop a cadre, a nucleus of highly trained school personnel capable of assuming control and of instructing others when the staff has departed from the site.

During the school year, two school administration/project staff meetings were held. The need for this type of conference depends on the degree to which the project's personnel is integrated into the school teaching staff. The principal and the assistant principals of P.S. 9 achieved so thorough an integration of the two staffs that few problems were generated by the presence of the project staff.

There are additional conference models, the values of which need to be investigated further during the 1969-1970 school year. All of them are variations around a central participant, the child: the child/teacher model, the child/staff model, the child/teacher/staff model. On a few occasions this past year, staff members initiated a child/staff meeting to provide the child with a profile of his academic needs. Although not enough was done in this area to assert the positive value of such a strategy, the staff believes these conferences may stimulate the child to become a self-directing participant in the learning act. There are other goals, short of the one of self-direction, that these conference models may serve to effect. They could be a source of insight to the child's self-image and his whole attitudinal repertoire. These insights would then be useful in prescribing strategies for the child.

We turn now to a more precise description of the teacher/staff member conferences which are the core of the in-service training program. These conferences are scheduled twice a week, but if the need requires a larger allotment of time, additional meetings are arranged. The scheduled meetings start shortly after the collection of test data is completed.

The teacher brings to the initial conferences a knowledge of the child's observable social and academic behavioral patterns. The staff member contributes diagnostic competence, respect for the teacher and the child's test results. Together, as a team, they diagnose the test results and establish a profileoof the child's academic needs. A long range plan of instructional content is projected for each child. In other words, the "what" of instruction, the first three code numbers of the taxonomy, is processed for individualization (see Appendix A).

The teacher/staff member team then addresses itself to the development of strategies, the "how" of instruction derived from the last four taxonomic numbers. The strategies that are devised are coupled with the individualized content to complete the treatment for each child. This is the high adventure of the team task. At first drawing upon the teacher's knowledge of the child, the strategies are initially the product of trial and error, unless, of course, the child was in the program the previous year. The trial and error aspect of the strategies is overcome by ovservational procedure described below.

OBSERVATIONAL PROCEDURE

Twice a week a staff member enters the classroom for the sole purpose of recording the degree of involvement the child exhibits in the tasks designed specifically for him. A copy of the observation sheet with an explanation of the recording symbols is included in Appendix B.

The observational record is analyzed to provide the child with a score that represents a ratio by participation units to total observational units, or an index of engagement. The observational procedure requires tracking the child's engagement in a learning experience for two-minute units in an observational period that is generally thirty to forty-five minutes long. At the moment of observation the child's overt behavior is assessed as a manifestation of either participation or non-participation and recorded as assessed.

The number of participation units over the total observational units multiplied by 2, since the units are of two minutes duration, indicates the child's index of engagement, or participation ratio. For example, an observational record showing ten units of participation in a total observational period of fifteen units indicates an index of engagement with a value of two-thirds or sixty-six and two-thirds percent $\left(\frac{\text{participation units}}{\text{observational units}} \times 2 = \frac{20}{30}\right)$. The child was engaged in the learning experience two-thirds of the observed time.

The observational records also furnish the data for analyzing the effectiveness of the taxonomic treatment. If the child's accomplishment of a task is ineffective as demonstrated by a low engagement index, the teacher/staff member team searches for the combination of conditions that is the cause of the ineffectual performance. They try to change these conditions with a considerable degree of precision. The last four numbers of the taxonomy which represent the strategies are varied systematically, until a combination of strategic factors evoking a high degree of child-participation is achieved.

When the "goodnes of fit" has been attained for the child, a considerable length of time is allowed for him to savour the sense of accomplishment. But eventually the teacher and the staff member turn to the problem of personalizing instruction for the child. The process of personalization requires that the child become academically adept within the structure provided by any combination of the four strategic factors. This necessitates exposing the child to conditions that are initially frustrating. The degree of frustration is controlled by the amount of exposure and by regulating the difficulty level of the content. The greater the degree of frustration, the smaller the amount of exposure and the lower the difficulty level of content.

This description has briefly outlined the in-service instruction program, particularly the operation of the teacher/staff member team. At this point it may be appropriate and interesting to include one staff member's work schedule in a typical project day. It should be noted that work performed in any one day does not cover the scope of the project.

9:00-9:45	Classroom demonstration by staff member of a strategy designed for three children
9:50-10:45	Development of materials requested by the teacher
10:50-11:30	Observation in the classroom
11:30-12:15	Conference with teacher about regrouping two children who are now too advanced for their present group placement
12:15-1:00	Lunch
1:00-2:00	Staff member/staff member conference for the purpose of devising strategies that will permit the integration of a dyslexic child into a total class instructional setting
2:00-2:30	Analyze observation sheet to provide the basis of a teacher/staff conference scheduled the next day
2:30-3:00	Acquaint self with rules of a new sight-vocabulary game that is to be used for instructional purposes the following day
3:00-3:30	Catalogue and store newly designed material

UNIT I CHAPTER 3

THE TAXONOMIC INSTRUCTION PROJECT

A SPECIAL EDUCATION RESOURCE CENTER

The Taxonomic Instruction Project radiates from a central resource room that contains the materials used in the project – a materials bank – and the staff, both of which function as resource reservoirs for children and teachers. As a Resource Center, Room 201 at P.S. 9 operates on two levels. On the first level, the room contains a catalogued and selectively stored collection of expendable and nonexpendable reading materials that are relevant to the remediation of children's skill deficits and the teacher's instructional needs. The materials can be characterized by the source from which they are obtained: commercially produced materials, staff-modified commercially produced materials, staff-originated materials completed by individual or collective effort, and teacher/staff-originated materials reflecting a varying degree of cooperative effort in the conception and creation of the items.

On this first operative level, the Resource Center is characterized by two diametrically opposed qualities. The Center is both static and dynamic. The physical plant of the Center is, of course, fixed; the teacher in search of content and strategies must come to it for fulfillment of these needs. Yet in a very basic sense, beyond the physical quality just mentioned, the Center is not a quiescent system, but a system in continual evolution through the germination of ideas and the development of strategies for teaching and learning. Growth is reflected not only in the ever-expanding quantity of items in the materials bank, but is also mirrored in a heightened teacher awareness of the need for individualization and personalization of instruction and in his expanded knowledge of the content and strategies that provide these instructional methods.

The Resource Center underwent a radical reorganization upon the development of the cataloguing procedure. By means of this procedure, every piece of material can be taxonomically described, stored and located in the room. A three-digit taxonomic code number based on the "what" of instruction – Basic Skill, Subskill and Sequential Level – is assigned to each item in the bank. This three-digit number is followed by a decimal point. Another digit then follows which designates the number of items utilizing this content. For instance with reference to the Taxonomy (see Appendix A), the number 111.8 specifies the eighth item in the bank having a Cognitive-Perceptual Basic Skill, a Symbolic Discrimination Subskill, and a Grade 2 and below Sequential Level. The number is recorded on a catalogue card (see Appendix C) which allows room for material identificaton, the name of the publisher, and a verbal description. The right-hand side of the card is a grid in which is recorded the four taxonomic code numbers of the strategies – the "how" of instruction: Instructional Method, Instructional Mode, Communication Input and Communication Output. The card, placed in a file box housing a specific Basic Skill, is arranged first in accordance with the Subskill, then the Sequential Level.

The item itself is stamped with its retrieval number which is the catalogue number plus the decimal number referred to previously. The item is then stored in that section of the room that is the locus for a particular basic skill. The shelves are stamped with the appropriate retrieval number. With training the teacher should be able to resort to the catalogue for content and strategy appropriate to a child's specific needs and then to retrieve the item that conveys the content and strategy from its placement in the room.

The catalogue boxes function as indicators of available items. The number of cards in each section of the box is the clue to the volume in the materials bank. For some taxonomic combinations, there is generated a multiplicity of treatment; for others, ideas are few, require a longer germination period, or the execution of ideas is difficult. Whatever the reason, it is natural to avoid that which is difficult to accomplish. The catalogue boxes, almost as much as the children's needs, prevent prolonged avoidance and direct our attention and efforts to the neglected taxonomic combinations.

The Resource Center stores more than tangible items. It stores those intangibles that emanate from both the staff members' educational competencies and their project roles as teachers, testers, diagnosticians, experimenters, learning environment manipulators and researchers. As a consequence of this dichotomy of resources and of the project's cataloguing system, there are three planes of communication open to the teacher in the Resource Center; he can browse through the shelved materials which will provide him with a general picture of available items to be used as instructional vehicles. He can focus his attention on the catalogue which will yield a more specific picture of content and strategy, the "what" and "how" of instruction respectively, and he can engage a staff member in a dialogue that will provide him with the "why" of the "what" and "how" of instruction. It is the "why" dialogue that the staff hopes to attain with each teacher in the teacher/staff conferences as well as in the Resource Center because at this dialogic level, the teacher and the staff member communicate with each other in the dialect of the Taxonomy. By gaining access to the taxonomic language community, the teacher will pass from the position of trainee to the position of trained and will ultimately accede to the position of trainer.

On the second level of operation, the Resource Center is extended by the activities of the staff members who go into the classrooms with tangible items and intangible qualities to demonstrate and field test the variety of ways in which materials and strategies are matched to the individual child's reading needs. By reducing the immobility of the resource room, the staff is able to work with the children and teachers in the natural environment of the classroom. Eventually their presence becomes an accepted part of the environment, and their interactions with children and teachers free of artificiality and constraint. In addition to these objectives, increased mobility enables the staff to reach out to the teacher who is insecure and reluctant to reveal his inadequacies. By entering the privacy of the classroom, the staff member is demonstrating not only content and strategies but possibly his own vulnerabilities as well. It is this act of candor and sincerity that frequently draws the teacher and staff member together as a team.

Symbolic of this effort to develop a mutually beneficial relationship between the teaching and the project staffs is the use of a Taxonomic Teaching Cart. Three shelves high, on wheels, loaded with materials to field test and demonstrate strategies, the Cart is moved from the Resource Center to a fifth grade classroom each day. There, in the classroom, the work proceeds with several groups of children having a reading disability range of nonreader to third grade level.

The top shelf of the Cart contains two hand-sized filmstrip projectors with assorted staff-made filmstrips of phonic skills; twelve name-labeled file card boxes containing word flashcards with checks and crosses recorded on the back of each card to indicate the words that are not retained: alphabet stencils for tactile-kinesthetic alphabet learning.

The second shelf of the Cart contains two tape recorders with a staff-made sequence of tapes for teaching consonant and vowel sounds; a pack of sight vocabulary words for each of the six children; jelly beans and cookies for a trial use of behavioral modification; a series of English lesson workbooks; a few rubber balls used for cueing the alphabet, and triggering the sequence of letters in words; magic markers for the children's use in making flashcards; and rulers used to develop skill in following directions.

On the bottom shelf are two typewriters, a Language Master with sight vocabulary cards, and a supply of earphones and junction boxes to hook several children into a tape recorder for simultaneous auditory reception of stimuli.

Thus, the Cart is a mobile Resource Center, bearing the material means by which to involve the teacher in the resource staff's dialect. The staff member field tests and demonstrates; the teacher watches, tries the demonstrated strategies, compares his performance with that of the staff member suggests modifications, asks why some things are done while others are not, questions the sequence in which tasks are ordered, requests changes in pacing, and provides assistance in creating condensations and extensions of tasks.

In this manner, decisions about instruction are reached on a cooperative basis. The teacher's critique is a feedback mechanism effecting a continual adjustment to the focus of effort, the child. The Resource Center is a vital part of the in-service training program. The end toward which our efforts are directed is for the teacher to recognize himself as the resource person in the classroom; for him to appreciate his own knowledge, training, personality, and intuitive feelings as the principal items in his private resource reservoir from which the taxonomic structure can emerge as a tool for effective diagnostic, individualized, prescriptive teaching.

UNIT I CHAPTER 4

ADMINISTRATIVE ASPECTS OF THE TAXONOMIC INSTRUCTION PROJECT

The application of The Taxonomic Instruction Project in a particular school involves two parallel systems of administration. Both systems are hierarchially ordered, but each issues from a different source of authority. The first system focuses solely on the needs of the school population including all personnel members and students, and receives its mandates from the school system's central board of authority. The second system which focuses on a small segment of the school's total objectives, the improvement of the children's reading ability and the in-service training of teachers to achieve this end, is mandated from a source of authority external to the particular school and school system, in this case, The Research and Demonstration Center for the Education of Handicapped Children, Teachers College, Columbia University, and may have additional objectives irrelevant to the school's central mission.

The success of The Taxonomic Instruction Project within a particular school is in direct proportion to three factors: the compatibility of the objectives of the two parties involved, the host school and the project; the precise enunciation and dichotomization of responsibilities, and the degree to which the host, the principal of the school, succeeds in internalizing and integrating the project's structure and operation with that of the school's.

The first two factors are viewed as easily achievable granted enough time and good will. It is the third factor that is the crucial one in determining the success or failure of any project. Without the cooperative effort of the principal to weld the project and the school into a coherent organization, the project and its staff would have been perceived as superimposed adjuncts on the school structure having functions of little substance or significance for the school's population. In a position of externality, the staff could expect to evoke distrust, or even hostility in the teachers.

The first school year of 1968-1969 at P.S. 9, Queens, was a very rewarding experience for the staff of The Taxonomic Instruction Project. The principal and the assistant principal, effected a complete assimilation of the project's staff who were viewed by both teachers and students as school personnel. The project's operation became an integral part of the school's curriculum. Cooperative effort was also exerted by the project's personnel to facilitate the assimilative process. The project's associate director evolved rules of professional behavior for the staff that acted to minimize their presence as a source of friction. These rules, applicable to similar situations, are worth repeating: The staff was neither to listen to rumor nor be the source of rumor from teacher to administrator or administrator to teacher; they were to preserve the teacher's image as the primary authority figure in the classroom; they were to recognize, acknowledge, and utilize the talents and resources of the teacher in executing the project program, and they were to extend to the principal as their host and the ultimate authority figure in the school the courtesies that were his due. All communications to the teachers were funneled through the principal's office; all the plans were subordinate to the school's schedule, and were submitted to the principal for his approval. Various levels of communication were maintained to calrify issues and resolve minor difficulties: associate director to teaching staff, associate director to administrator, and administrator to project staff. The adherence to these rules effected first a symbiotic, synergistic relationship between the teachers and staff members, and then an enlargement of the relationship to include the children.

Evaluated by administrative standards, the staff has a supervisory function in the school. It is supervision of one subject, reading, in the broadest sense of the word. It is supervision without the element of coercion, and includes the availability of the staff as consultants, resource persons, demonstrators, experimenters, researchers, and teachers of teachers and children. Hopefully, this system of supervision culminates in the teachers' transference of the taxonomic principles and operation to other subjects, and in the development of teachers as leaders in a revitalized educational movement.

There are, of course, administrative features of the project that have been shaped and formalized prior to any particular commitments that are made to a school or school system. The taxonomic principles have been clearly defined; the staff functions and job definitions have been delineated (see Appendix D); the rules regulating public relations have been enunciated. These are intraproject issues that have been resolved at various administrative levels prior to the project-in-school operational phase.

In addition, there are other administrative matters that stem from the project's affiliation with The R & D Center and the Department of Special Education at Teachers College. Although these affiliations may affect the project's operation within the school, the administrative issues are external to the school, and are resolved without the assistance of the principal.

This is an administrative task of no mean dimensions. It requires the ability to maintain the parallelism of the two systems, and at the same time achieve an integration of the two whenever necessary.

UNIT I CHAPTER 5

THE FUTURE OF THE TAXONOMIC INSTRUCTION PROJECT

It is much easier, if not praticularly comforting, to look at events in retrospect than to delineate the course of future actions. To second-guess what has passed when all the variables are open to review is a minor skill in comparison to predicting a course of action where none of the variables are known. In this Unit, The Taxonomic Instruction Project Manual, the staff has presented the past, disclosed some mistakes, and described the 1968-1969 school year at P.S. 9. At this point in time the teacher training aspect of the project is at the foothills of advancement into the future. What is planned for the near future, and anticipated for the distant future?

To answer these questions other questions about the future must be considered: How can the project grow and in what directions? What aspects of the project are worth proliferating for children and teachers? What refinements need to be made in the project's current operation? What modifications does the proliferative process entail? The questions are in varying stages of deliberation; definite decisions have been reached for some of them; others have generated only tentative conclusions, and a few are still being debated. But there has been sufficient deliberation for a fairly clear formation of the project's future to have evolved.

It is evident that the project's long-range operation can develop in two directions: horizontally and vertically. Horizontal growth is characterized by expansion within a specific school or within a particular segment of the school system: for example, schools devoted to the education of the educationally retarded, behaviorally disordered child. Although there is a broadening of the base, horizontal growth does not necessitate substantive change in the project's operation and objectives.

Vertical development, however, is realized by movement into other types of educational subsystems, such as: education for the normal population, for the gifted, for the mentally retarded, for the physically handicapped, and education in institutional settings. This vertical growth process, a branching off from the central organization and population, entails modification of procedures, and possibly objectives.

A beginning is being made in this direction with a current commitment to initiate The Taxonomic Instruction Project in a special service school, P.S. 134, The Bronx. At the outset there will be an involvement with four classrooms, four teachers, and two reading coordinators. Treatment will be provided for the children and in-service training for teachers and coordinators. If the in-service training proceeds at the anticipated pace, by midyear the six trainees will be sufficiently advanced in the taxonomic instructional principles and methods to assist in the training of six additional teachers. By the end of the year, therefore, P.S. 134, The Bronx, should be well on its way toward becoming an autonomous unit of The Taxonomic Instruction Project with a Resource Center and twelve teachers trained to work with the taxonomy.

Another avenue of vertical development is in the application of the taxonomic approach to instruction in other academic areas, for example, mathematics. There have been requests to extend the project's aims toward mounting a taxonomic mathematics program this year. Development in this direction will necessitate the formulation of a taxonomy relevant to the subject matter. It is likely that the last four code numbers of the taxonomy of reading instruction (Instructional Method, Instructional Mode, Communication Input, Communication Output, see Appendix A), combinations of which form the instructional strategies, can be abstracted in totality to form the nucleus of the "new" taxonomy. Then, the task of developing another subject taxonomy is seen as an enunciation of the Basic Skills, Basic Subskills, and Sequential levels, that are requisite for the mastery of the subject.

Development in a horizontal direction will take place in 1969-1970 at P.S. 9, Queens. The Taxonomic Instruction Project service is to be made available to all the members of the P.S. 9 teaching staff who wish to become knowledgeable in its principles and adept in the implied practices. Consequently, there will be a horizontal expansion of the in-service training program attended by a greater utilization of the materials and resources in the Resource Center.

As a result of the research design of the 1968-1969 year, the teachers of P.S. 9 will have had varying degrees of exposure to the taxonomic principles and practices. Some of the teachers, having reached an advanced level of training, will form the cadre to assist in the training of others at less advanced levels. This is the first step in the attainment of the training objective, preparing for the staff's departure from the site, leaving behind the Resource Center and a nucleus of taxonomically trained personnel to maintain P.S. 9 as a viable taxonomic teaching unit available for demonstration to other schools of this type.

The horizontal growth, as manifested in the extension of our in-service program to all the teachers of the school, is attended by the inclusion for project treatment of the entire student population. The increased number of subjects may provide the means for establishing positive correlations between types of social-academic patterns and specific taxonomic treatments. The process of dual matching – content compatible with the child's educational needs, and strategies consonant to the child's behavioral patterns – may enhance treatment generalization which is viewed as a vertical function. The final effect of this process will be to spread the applicability of treatment beyond the specific child to a group of similarly profiled children. This spread of effect will be accomplished by "packaging" for distribution prototypic and field-tested items of educational treatment, specifying the kinds of educational deficiencies and social maladjustments for which the items have provided substantial amelioration. An additional purpose of the "packages" is to provide effective models from which to generate additional strategies and sequenced curricula.

It must be emphasized that the utilization of the "packages" is intended to further facilitate training in the basic concepts of taxonomic instruction. The project staff is prepared to provide such training at a series of workshops which would include a "live" presentation of the project's implementation at P.S. 9: video-tapes of strategies, transparencies highlighting central taxonomic issues, case histories, and exercises in the manipilation of the taxonomy. Another planned source of training is a video-tape version of the Workshop (see Unit III) which covers all the items listed above with the exception of the last two. This tape will offer a comprehensive introduction to the project. Each Workshop method of disseminating the taxonomic instruction concept has been used on a number of different occasions, and has generated considerable responsiveness in the participants.

In addition, the staff plans to increase the video-taping of the taxonomic strategies, using a technique that will span the course of the strategy for a particular child from its inception to its termination. The tapes are intended to be mini-lessons which will provide the case history of the child using the strategy, the "how," "what," and "why" of instruction, and a critical estimate of the strategy's success value. Thus, the Resource Center will contain a lending library of video-taped strategies for the training of teachers too removed to visit the project site.

The viability of the taxonomic instruction concept has been demonstrated this past year by the high involvement level of the students in their academic tasks as recorded on the observation sheets and by the movement of teachers from non-taxonomic to taxonomic instructional procedures as indicated in the recorded lesson plans for the children. The extensive professional interest engendered by the project and the responsibeness of audiences to the taxonomic workshops provide additional empirical evidence of the project's viability. It now remains to expand the in-service training program in a vertical direction by utilizing Resource Center and school population for pre-service training of masters and doctoral students. The pre-service aspect of the training program would offer graduate students the opportunity to work with educationally retarded, behaviorally disordered children, would give exposure to the classroom implementation of taxonomic instruction as well as to the theory, and would furnish a setting of reality in which the students could test and evaluate their personal qualifications for teaching this population.

The staff has no selection procedures for the inclusion or exclusion of children. They work with all the children in the school. Prior to their admission to P.S. 9, the children are diagnosed emotionally disturbed and socially maladjusted, but the testing procedures and criteria used to identify the primary disability of emotional distrubance are not known to the staff members. There is enough evidence to justify the conclusion that the entrance procedures are inadequate for differential diagnosis. It is believed that from ten to twenty percent of the children at P.S. 9 are secondarily emotionally distrubed, and have other primary disabilities: dyslexia, neurological impairment, environmental retardation, and sensory deprivation. Admittedly, this assessment is intuitive with no "hard" data to substantiate the claim. However, the behavioral signs, both academic and social, displayed by the children in the classroom setting seem as symptomatic of other disabilities as they are of emotional disturbance. The project staff's testing procedures (see Appendix E) yield little assistance in differential diagnosis, but there are a number of experiments directed by other R & D Center researchers that show considerable promise in this direction.

Such research will be used in the 1969-1970 year to refine the delineation of the child's learning disabilities. Ultimately, the staff hopes to use all of the R & D research that is pertinent to the project's operation and school population. A two-way informational system will develop; research, programs and materials flowing from the R & D center to the project for field testing and demonstration, and feedback on their value for the projects populations returning to the R & D center.

There is one aspect of teaching that is often overlooked: the affect of the physical environment of the classroom on learning. Usually the classroom is thought of as desks, blackboards, and bulletin boards. Their array, or disarray, is a function of the exigencies of a particular lesson or teacher's style.

It would seem, however, that the bare bones of a classroom could be supplemented or used in ways that could be more efficacious for achieving disparate goals. Some questions need to be asked: Are there atmospheres that can be created to enhance the child's conception of himself? Can the physical objects within a classroom be so arranged as to create "moods" that facilitate learning? Are some arrays more productive in generating positive social relations than others? Can the child experience relational concepts such as, front, back, up, and down through particular arrangements of the physical objects in the room? Might a child be sensitised if he creates his own room environment? These and other questions are to be explored with children having hard-core social or learning disabilities, in an empty classroom at P.S. 9 in the 1969-1970 year.

The end process toward which effort will be directed, is a computerization of The Taxonomy or The Taxonomies, depending upon the successful achievement of the project objective to apply the taxonomic teaching principles to other academic subjects. The envisioned picture includes the following physical facilities and procedures: central Taxonomic Resource Centers in each school district that function as repositories of consultative services and taxonomically catalogued materials; a computer in each teacher's room; a computerized procedure for dialing to the central Resource Center the taxonomic treatment for each child, and the delivery to the classroom of materials congruous with the treatment.

The mechanization of The Taxonomic Instruction Project may engender a sense of distaste in many educators. Computerization would seem to effect dehumanization of the teaching act but the end must not be confused with the means. The computerization of The Taxonomy would, in no way, contravene the need for either in-depth diagnosis of the child's educational needs, or continual surveillance of the child's involvement in the task. It would, in fact, release the teacher from the deadly grind of non-instructional duties to the stimulation of teaching the child.

The staff anticipates a very busy and rewarding year. While the plans for two-directional growth will certainly yield refinement and modification in both operation and procedures, we forsee no funadmental change in the taxonomic principles of The Taxonomic Instruction Project which the project staff believes are among the most viable teaching principles in the field of special education today.

UNIT II

THE TAXONOMIC INSTRUCTION PROJECT HANDBOOK

PREFACE TO UNIT II

THE TAXONOMIC INSTRUCTION PROJECT HANDBOOK

Much emphasis has been placed on the importance of developing strategies for the emotionally disturbed, socially maladjusted child. In fact, strategies are the primary foci of this staff. This is a very foreign concept for teachers to understand, although teachers of minority children may be more willing to concede the greater value of strategy over content than teachers of other populations. The staff does not, of course, deny the need for relevent content, but what makes for relevance is a question worth investigating. Diagnosis through a precise examination of test results points the way to relevant content. It is much easier to establish the "goodness of fit" for the individual child when it comes to content. Diagnosis shows or pinpoints what is missing in the child's academic content. Properly executed, testing and diagnosis eliminate trial and error from this aspect of teaching. Educators think they know from the test results what is academically relevant for the child, but does the child concur? Hopefully, his concurrence is attained when the appropriate strategy has been developed. The "how" of instruction makes the "what" of instruction relevant to the child.

In this section the five Basic Skills of the Taxonomy (1. Cognitive-Perceptual, 2. Language Analysis, 3. Comprehension, 4. Study Skills, 5. Aesthetic Expression) have been used as the structure for detailing the "what" or the content of instruction. Each Basic Skill has been sequenced for a progression of content from simple to complex either in outline or descriptive form. Whenever possible, the Basic Skill progressions of content have followed the order of their enumerated Subskills. This is not a proclamation of an unalterable order of priority for the content intrinsic to the Basic Skills and their Subskills. Certainly Comprehension (Basic Skill 3) is not isolatable from Cognitive-Perceptual (Basic Skill 1). However, the project staff members feel that the Basic Skills and Subskills as enumerated in the Taxonomy provide a reasonable structure for progressions of content that are sequenced on the bases of simplicity to complexity of task and frequency to infrequency of usage.

Basic Skill 1, Cognitive-Perceptual, is the first of the Basic Skills to be presented as a progression of content. It has been subdivided into two skill sequences – Auditory Discrimination and Visual Discrimination. Effort in establishing these sequences was directed toward paralleling the developmental growth of the auditory and visual systems. Although the staff recognized the artificiality of separating these two sequences, it was considered a desirable device by which to prescribe educational treatment for observable perceptual distrubances.

The content of this section consists of exercises designed to initiate, develop and stabilize the processes of auditory and visual discrimination. Approximately ten percent of the target population has perceptual difficulties and language deficiencies that exacerbate reading difficulties. In a sense, this content consists of the readiness skills children usually acquire prior to compulsory school attendance. To attempt the development of higher level conceptualization without these readiness skills is to attempt the impossible. Perception must come before conception.

The progressions of content for the Auditory and Visual Discrimination Sequences do not follow the ordered enumeration of the five Cognitive-Perceptual Subskills (1. Symbolic Discrimination, 2. Memory Span, 3. Directionality-Laterality, 4. Time Relationships, 5. Space Relationships). Instead, the five Subskills have been converted into task progressions, the items of which lend themselves in turn to specification in the taxonomic code numbers and language systems of this Basic Skill, its Subskills and the applicable Sequential Levels of 1. (Grades 2 and below) and 2. (Grades 2-4).

The task of reading on the primary level is often considered to subsume two skills: that of decoding and that of comprehension. The development of the decoding skill becomes the basic task of the beginning reader. This skill involves the internal translation of a grapheme or written letter into a phoneme or speech sound. The correlation of the written symbol and its sound becomes external and thus open to critique by the teacher when the child reproduces the sound aloud.

The child's decoding skill is in the process of development when he takes a lawful sequence of graphemes – the written word – and is able to match it with the appropriate sequence of phonemes – the spoken word. The task of decoding evolves from pronunciation of a single grapheme (e.g., c = k). It then takes the form of a complex reproduction of several graphemes integrated to form a word (e.g., cat = kaet). One of the ultimate goals of decoding is the development of the child's facility to pronounce a multigraphemed, multisyllabic word (e.g., the word principal). The child is involved in separating the name of a letter from the sound that letter makes. In the case of vowels, one grapheme has a minimum of two sounds – long and short – and in the synthesis of more than one grapheme may make one sound (e.g., the digraphs th, ph, sh, wh, ch or the dipthongs ae, ai, ie, etc.). These tasks are still to be considered a decoding skill; they involve the translation of symbol into sound but not necessarily of sound or symbol into meaning. Thus it is possible to teach someone to "pronounce" French or Hebrew without simultaneously hooking up the sound which has been translated from the symbol to the meaning of the sound. Comprehension facilitates pronunciation of graphemes but it is not a prerequisite for the skill called decoding.

Therefore the next skills, organized in a progression of content from simple to complex, are those of Language Analysis (Basic Skill 2). Three Subskills have provided the basis for three subdivisions: The Consonant Sequence, The Vowel Sequence and The Word Structure Sequence (Language Analysis, Basic Skill 1; Subskills 1, 2, and 4).

Although effort is directed toward improving the child's sight vocabulary (Subskill 3 of Basic Skill 2, Language Analysis) and syntax (Subskill 5 of Basic Skill 2, Language Analysis), the Language Analysis Sequence does not include these Subskills because their contents have not been sufficiently organized for this purpose. The absence of the two sequences (Subskills 2 and 5, Sight Vocabulary and Syntax) from the Languare Sequnece does not preclude the application of the Taxonomic Code to materials conveying instruction in sight vocabulary and syntax, since item specification in terms of Taxonomic Code is not contingent upon operative sequences.

Although the arbitrary decision was made to sequence the three subdivisions discreetly as if they were unconnected elements, the teacher's use of the content should be horizontal – across the three subdivisions – rather than downward – completing one subdivision at a time. As a matter of fact, the teacher would find a vertical use of the content unmanageable. What was the purpose then in so arranging the material? It was to provide a high degree of structure by demonstrating the relatedness of the items within each sequence. The other aspect of item relatedness, intersequence, is demonstrated through the teacher's use of the content horizontally. The "hard" sell approach to the horizontal use of the Language Analysis Sequence covers the entire content of The Handbook. If instruction is concentrated on one Basic Skill to the exclusion of the four other Skills, then the learner is receiving a very lopsided view of the reading process. Therefore, it is in the child's interest for the teacher to provide a reading fare of carefully balanced items selected from each of the Taxonomy's five Basic Skills, their respective Subskills and Sequential Levels. It is important to realize that the items from each of the sequences need not be at the same level of complexity. The level of item complexity is established by the evaluation of the child's test results and the diagnosis of his academic needs. It is this procedure that adds the element of balance to the reading fare. Balance in reading fare is achieved by recognizing the child's academic imbalance and by providing content selected for the purpose of remediating his imbalance.

The next sequence of content evolved from Basic Skill 3, Comprehension. Proficiency in reading requires not only the ability to break the phoneme-grapheme association code but the ability to comprehend the meaning encapsulated within the code as well. The two abilities develop concommitantly and so integratively that the dichotomization of comprehension and decoding is really an artifact of the Taxonomy that enables the teacher to be more keenly aware of the skill for which instruction is planned.

Instruction in comprehension can present unique problems for the teacher of the emotionally disturbed, socially maladjusted child. The child often comes from a culturally disadvantaged environment with minority-oriented expectations and behavioral patterns. Such a child's depressed comprehension score does not necessarily confirm inadequate comprehension ability. The score may reflect inadequancie in decoding, language development, and an experiential paucity that prevents the child from handling certain kinds of comprehension tasks.

In the range of comprehension abilities expected at the elementary grades, the emotionally disturbed socially maladjusted child often displays a wide scatter of abilities. Standardized silent reading tests do not often pinpoint the exact areas of deficiency. Consequently, classroom instruction should be organized in a progression of comprehension tasks from primary to upper-elementary levels, and the child's ability at these tasks should be observed, recorded and diagnosed. This procedure provides an effective means to tailor instruction to the child's strengths and weaknesses in comprehension.

The Sequence or Comprehension Skills section consists of an overview of the developmental growth of comprehension together with some tasks and environmental conditions that effect this growth. The instructional items suggested in the comprehension section of the Handbook are specifiable by the taxonomic code number system of Basic Skill 3 (Comprehension), its Subskills 1 through 7 (Main Ideas, Details, Sequence Relationships, Word Meaning, Context Inference, Critical Analysis, Recreational Reading) and the grade levels at which types of comprehension tasks are presented, Sequential Levels 1 through 4 (Grades 2 and below, Grades 2-4, Grades 4-6, Grades 6 and above). The omission of Sequential Levels 5 and 6 (Ungradable and Multilevel) is predicteda on the irrelevance of these levels to the instructional items.

The Taxonomy, as originated by the project director, consisted of four Basic Skills. It was used in this form for two years. During the past year, the associate director and the project staff recognized the need to add a fifth dimension – the Basic Skill of Aesthetic Expression. The expansion of the Taxonomy to include Aesthetic Expression is not to be considered a reflection of the staff's desire to heighten the children's appreciation of society's "finer" cultural values. It is, rather, the recognition of the children's alienation from society that has prompted the use of Aesthetic Expression as a Basic Skill. If instruction results in a heightened sensitivity to art forms, it is an ancillary effect that, although welcome, is neither anticipated nor planned. The staff intends the use of Aesthetic Expression as a back-door approach to reading instruction. Drawing content from the fine arts and their specialized vocabularies and coupling this content with appropriate strategies may yield the ultimate strategy – the means to overcome hostility generated by traditional reading materials and to spark the child's responsiveness to and participation in the learning process.

Tentative thoughts have led to the production of three instructional sequences: Art, Sociodrama and Music. In the teacher's conferences next year, the staff members will urge more frequent use of this content for children. If positive results are observed, new sequences will be designed and modifications in the present sequences will be made where necessary. Item specification in the three instructional sequences of Art, Sociodrama, and Music can be expressed in terms of the code number and language systems of Basic Skill 5 (Aesthetic Expression), Subskills 1, 2, and 3 (Creation, Interpretation, and Reception) and Sequential Level 5 (Ungradable). The Ungradable level signifies content that cannot be assigned to specific grades for instructional placement.

The discussions of strategies usually evoke the teacher's need for content. Similarly, this discussion of content will probably evoke the teacher's need for materials. The staff views materials as having no intrinsic value in themselves. The value of a piece of material is a function of the appropriateness of its content for an individual child and the ease with which the material lends itself to adaptation for a specific strategy. Therefore, in a hierarahy of a child's instructional needs, materials are in the order of least priority, while content and strategy are in ascending orders. The material is merely a vehicle by which to convey content and strategy. The staff has evolved a procedure for developing materials. Whenever possible, commerical materials are used. If there is some aspect of the commercial material that is inappropriate, modifications are made to correct the inappropriateness. If no commercial material is available, the staff members design and produce the required items. Unfortunately, there are many aspects of commerically produced material that are not suitable for the population of emotionally disturbed, socially maladjusted children. Often, instruction proceeds at too fast a pace, or requires too large a step in understanding for the child; the content is too unsophisticated, or unrealistic for the child's brand of realism. Therefore, in the three-year course of the project's development, there have been numerous situations necessitating the creation of materials.

In a sense, there is nothing original about the project's "original" materials. Innovation has been effected by the precise sequencing of content using minimally sized instructional steps, the careful adaptation of material for transmission by communication input channels other than the visual, the adjustment of task duration to the attention span of the child, and the reiterative presentation of content using various combinations of the Taxonomy's Instructional Methods, Modes and Channel Outputs. Innovation, then, is as much a product of strategy as of content. Without a well-devised strategy, content will not effect academic progress in the child.

With this thought in the forefront, a description of some of the material is provided. For the development of auditory discrimination, the staff has designed and executed a series of audio tapes in which near-contrastive sounds are compared first in the initial position, then in the final position, and finally in the medial position. The series begins with single consonants, and proceeds to the consonant digraphs and the consonant blends. The tapes are of short duration, approximately twelve to fifteen minutes, and provide immediate reinforcement upon completion of the task. A copy of the worksheet from which the tapes are recorded is included in the Appendix F. The staff has found that this series is at too high a level for the perceptual development of some of the children. They are, therefore, in the process of developing a similar series for far-contrastive sounds which involves perceptivity of a lower order.

There is another series of audio tapes to develop listening skills. These tapes require the child to follow directions. They, too are of short duration and are self-correcting. A taped series for comprehension has been completed for the fairly proficient readers of our population. The staff is now in the preocss of adapting this series for the less proficient reader.

For those children with adequate visual perception, we have partially completed a filmstrip series which focuses attention on initial single consonants, final single consonants, initial blends and diagraphs and final blends and diagraphs. Another filmstrip series is projected for the purpose of calling the child's attention to the medially positioned short vowel. Although these filmstrips are designed to develop phonic skills, they are also used by the teachers to effect improvement in visual memory.

These items are only a small part of the reservoir of materials that is housed in the staff's resource room. The important point is not the size of the reservoir but the quality of its items. The strength of a particular item's content and strategy cannot be generalized from the group of children on whom it was field tested to another group having different or even similar socio-academic profiles. There is, as yet, no objective evidence to permit the generalization of applicability. However, it is the staff's intention to direct its efforts toward this objective.

UNIT II CHAPTER 6

SEQUENCE OF COGNITIVE-PERCEPTUAL SKILLS

SECTION I: AUDITORY-PERCEPTUAL SKILLS

In this section, the Handbook, the focus of attention is the "what" of instruction – the content that is to be transmitted to the pupil by some specific piece or pieces of appropriate material. Selection of content items is determined by the pupil's strengths and weaknesses as evinced in the test results of the project's diagnostic battery.

The particular part of the Taxonomy being sequenced for content is reproduced before the sequence for the reader's convenience. In this case it is Basic Skill 1 and the Subskills relevant to this Basic Skill. It must be remembered that the abstract is only a fragment of the Taxonomy and for complete understanding of the taxonomic principles and practices, the reader ultimately needs to reintegrate the piece in the whole.

As has been stated previously in the Preface to the Handbook, the content of Basic Skill 1, Cognitive-Perceptual, has been sequenced as a progression of tasks that were designed to develop auditory discrimination. The items of the sequence are specifiable in both the taxonomic number code and the taxonomic language terms of Basic Skill 1 and its attendant Subskills.

THE WHAT OF INSTRUCTION

Basic Skill	Basic Subskills	Sequential Levels
1. Cognitive-Perceptual	1. Symbolic Discrimination 2. Memory Span 3. Directionality-Laterality 4. Time Relationships 5. Space Relationships	1. Grades 2 and Below

AUDITORY PERCEPTUAL SKILLS

I. Auditory Discrimination

A. Identifying Gross Sounds

Non-verbal sounds that command attention, require analysis, may alert the individual, and galvanize to action

"Close your eyes. What is this sound?"

Examples: siren, telephone, drum, alarm clock, crying, etc.

B. Identifying Fine Sounds

Non-verbal sounds, not as pervasive as gross sounds, and therefore, do not command the same degree of attention

1. "Close your eyes. What is this sound? ______________________________

   Examples: humming, sharpening pencil, snapping fingers, rustling of leaves, purring of cat, etc.

2. Duplicating rhythms tapped out by the teacher

   Examples: . . —, . — . , — . . , — — . , etc.

3. Discriminating the louder of two tones, then the loudest of three, etc.

   Examples: piano, pitch pipe, recorder, bells, etc.

4. Discrimination of the pitch of two tones, then three tones, etc.

   Examples: piano, pitch pipe, recorder, bells, harmonica, etc.

C. Identifying Speech Sounds

1. Detecting paired rhyming words that are spelled alike. "I am going to say two words that rhyme:"

   Examples: at — cat
   hat — sad
   land — grand
   cat — cot

   Note: When training is initiated, care should be taken to change only one variable at a time. For instance, the consonants should be changed. Success with this variable leads to the introduction of another variable, changing the vowel sounds.

   a. Words rhyme if the vowels and final consonants in the words are pronounced the same way.

   b. When the vowel and the final consonants are the same, the words rhyme.

   c. If the final consonants are changed, the words do not rhyme.

   d. When the initial consonant or sound is changed, the words rhyme.

   e. If the vowel is changed, the words do not rhyme.

D. Sequence in Rhyming Words

1. First Sequence – The initial position can change and the words will rhyme.

   Examples: bat — mat
   bat — sat
   bet — set
   let — get

   Second Sequence – Words will not rhyme if the final consonant is changed.

   Examples: bat — bad
   bat — bag
   bat — back
   map — mad
   map — man
   met — men

Third Sequence – Reinforcement in practice and knowledge of the rules governing initial and final positions which affect rhyming.

Examples: bad – glad
bad – bat
mad – sad
mad – man

Fourth Sequence – Words will not rhyme when the medial vowel is changed.

Examples: cat – cot
cat – kit
cat – cut
bat – cat
bat – bit
bat – fat
bat – but
bat – bet
bet – met

Fifth Sequence – Words will not rhyme when the initial consonant and medial vowel are changed.

Examples: sat – bit
bit – mut
sag – bug
ran – sun
pit – rat

Sixth Sequence – Words will not rhyme when the change involves a combination of initial consonant, medial vowel, and/or final consonant. Words will rhyme if the change involves initial consonant blend.

Examples: brand – send (initial and medial)
brand – band (initial)
brand – blend (initial and medial)
brand – gland (initial)
band – bang (final)

2. Detecting paired rhyming words that are spelled differently. (Visual stimulus may be required.)

Examples: flu – flew
blue – blew
tale – tail
sale – sail
road – rode
toad – towed

3. Detecting rhyming words

   a. in poems – oral presentation

      Example: Jack and Jill

   b. in an oral series (auditory retention)

      "I am going to tell you a word like box. Then I shall say three more words. One word will rhyme with box. Listen and tell me which word it is."

      Examples: box: fox some tax
      pound: penny sound pinned

   c. Oral series – expanded (auditory retention)

      "Listen to these words. Then tell me which ones rhyme."

      Examples: day chair may find
      hide pine sick mine

      Three rhyming words: "Listen to these words. Which one does *not* rhyme?"

      Examples: pack tack penny back
      pot hop hot cot
      hark park back bark

4. Hearing if words have the same sounds in similar positions.

   a. Beginning (initial) consonants

      Examples: mop – man
      man – mit
      mit – sit
      sun – run

   b. Final consonants (single)

      Examples: mat – sat
      sat – sad
      sat – sap
      tar – tan

   c. Beginning sounds (blends)

      Examples: gland – globe
      brand – bland
      blue – glue
      cream – dream

   d. Final consonant (digraphs)

      Examples: sing – bring
      sink – sing
      shift – shell
      with – watch

E. Identifying Letter Names

   1. Alphabet recitation in sequence

   2. Alphabet recitation out of sequence

      a. "What comes after B?" – "What comes after M?" etc.

      b. "What comes before B?" – "What comes before L?" etc., etc.

F. Identifying Aesthetic Sounds – Any nonverbal and/or verbal sounds that produce a sense of pleasure for the listener. This definition may include poetry reading, story telling, and music selections.

   1. Music Selections.– for the following purposes:

      a. Making up a story to accompany instrumental music

      b. Recounting a story told in a song (folk music)

      c. Subjective emotion expressed – "How does this music make you feel? Why do you feel this way?"

   2. Poetry Reading

      a. "Can you tell me the sequence of events in the poem?" (e.g., Richard Cory, Ballad of a Landlord, etc.)

      b. "How does the poem make you feel? Why?"

   3. Story Telling

      a. "What is the mood of the story? How does it make you feel?"

      b. "What would you change in the story?"

      c. "Did anything like this ever happen to you?"

      d. "Do you know any people who are like the characters?"

II. Auditory Retention

A. See sections 3A and 3B

B. Memory Games

   1. "I have a basket (trunk). And in this trunk, I put a mouse."

      The second child repeats the above and adds another item which begins with the same letter (sound). "I have a trunk. And in this trunk, I put a mouse, a cat, a mop, a mug, ... etc."

      Add humor by inserting the absurd: "I put in a mountain."

      The person who cannot think of another word begins the list all over again.

      CHILDREN SHOULD BE TAUGHT TO LISTEN FOR MISTAKES.

   2. Telephone

      One child makes up a message. "I am going to get 50¢ to go to the grocery store." He writes the message on a piece of paper and gives it to the teacher. The child then whispers the message into the ear of the child sitting next to him. The second child does the same with the third child, the third with the fourth, etc. After the message has gone full circle, the original message is read after the last child tells what he heard.

      CHILDREN SHOULD BE TAUGHT TO LISTEN CAREFULLY TO WORDS AND WORD ORDER

III. Auditory Attentivity

A. Obstacles: Hearing information given against a background of auditory interference

1. Taped instructions recorded with music as a background.
2. Letter names recorded with white noise (static) heard intermittently.

B. Games

1. Simon Says

   Child must listen for correct and incorrect auditory direction
   Clue word must be heard and ingested.

2. May I Take a Giant Step?

   Child must listen for direction ("take a small step, a step backwards, a giant step, a hop," etc.)

UNIT II CHAPTER 6

SEQUENCE OF COGNITIVE-PERCEPTUAL SKILLS

SECTION 2: VISUAL-PERCEPTUAL SKILLS

This is the second progression of skills that evolved from Basic Skill 1, Cognitive-Perceptual and its accompanying Subskills. The first progression presented in section 1 is directed toward the development of auditory discrimination; the second progression presented in the next few pages is aimed at the development of visual perception.

The pupil's visual-perceptual strengths and weaknesses as demonstrated in the test results of the project's diagnostic battery and in classroom observations are the determinants in selecting the items of the progression. The items represent the content that is to be transmitted to the child by specific pieces of appropriate materials. The Visual-Perceptual Sequence items are as specifiable in the taxonomic number code and taxonomic language terms of Basic Skill 1 and its attendant Subskills as the items of the Auditory-Perceptual Sequence.

The same Basic Skill and Subskills code and language systems are applicable to the two progressions, Auditory-Perceptual and Visual-Perceptual, because the sixth number of the total taxonomic designation specifies the Communication Input that is to be used for the transmission of the content. Communication Input 1, 2 and 4 stipulate the Visual, Auditory and Auditory-Visual channels respectively.

Basic Skill 1 and its Subskills are reproduced before the Visual-Perceptual Skills progression for the reader's convenience. Again, the reader is cautioned to reintegrate this fragment into the framework of the total Taxonomy in order to achieve a complete picture of the taxonomic system.

THE WHAT OF INSTRUCTION

Basic Skill	Basic Subskills	Sequential Levels
1. Cognitive-Perceptual	1. Symbolic Discrimination 2. Memory Span 3. Directionality-Laterality 4. Time Relationships 5. Space Relationships	1. Grades 2 and Below

VISUAL-PERCEPTUAL SKILLS

I. Sense of Distance

  A. Distance of child from objects

    1. Approximations using descriptive terms of far, near, distant, close

      Ask questions: Can you touch it?

How many arms' lengths are you away from it?

Can you spit on it from where you are?

2. Demonstrate the relativity of these terms through the use of different objects such as mountain tops, the moon, the ocean, etc.
3. Approximations using quantitative terms of yards, feet, inches.

B. Distance of two objects from each other.

1. Using descriptive terms
2. Using quantitative terms

I. Sense of Spatial Relations

A. Relation of child to object or vice versa

1. In front of; before
2. In back of; behind
3. Next to; beside, side-by-side
4. On top of; over, above
5. Underneath; below, under

B. Relation of objects to each other

. . . . Use the same terms as above.

I. Directionality

The following exercises may help the child develop the left-to-right eye movement necessary in reading.

A. Learning left from right

Raise your right hand.

Raise your left hand.

Who or what is to your right?

Who or what is to your left?

Turn to the right.

Turn to the left.

Move your head from left to right.

B. Tracing mazes

C. Tracing letters

D. Tracing words

IV. Identifying Similarities

A. Gross similarities of size, shape, color and pattern of design

NOTE: For all the identifications tasks described in this part of the sequence, the variables of similarity, or dissimilarity, should be controlled. The items being compared should be similar, or dissimilar, in one variable at a time. As the child becomes more adept and responsive, the complexity of the task can be elevated by increasing the number of variables.

1. objects
2. pictures of objects
3. pictures of geometric figures
4. letters
5. words

NOTE: The child should learn to express the similarities as often as possible in complete sentences. Concepts are developed and gain in depth of thought through language. Pencil and paper exercises in designating similarities are useful only after the child has been encouraged to express his perceptions verbally.

B. Fine similarities of size, shape, color and pattern

1. objects
2. pictures of objects
3. pictures of geometric figures
4. letters
5. words

V. Identifying dissimilarities

A. Gross differences of size, shape, color and pattern

1. objects
2. pictures of objects
3. pictures of geometric figures
4. letters
5. words

B. Fine differences of size, shape, color and pattern

The same sequence from objects to word should be followed.

VI. Identifying both similarities and dissimilarities

1. objects
2. pictures of objects
3. pictures of geometric figures
4. letters
5. words

VII. Visual Attentivity

A. Figure-Ground discrimination

A series of pictures in which the figures (objects, geometric shapes, letters, words) are embedded in backgrounds of increasing complexity.

B. Minimal cue identifications

A series of pictures in which the figures (objects, geometric shapes, letters, words) are incompletely drawn.

VIII. Sense of Time Relations

A. Pictures

Arrangement of a series of related pictures in a temporal sequence after which the child tells why he ordered the pictures in a particular way.

B. Words

Arrangement of a series of related words in a temporal sequence after which the child details the story of the ordered words.

Example: hospital, ambulance, car, operation, accident
sequenced to
car, accident, ambulance, hospital, operation

IX. Visual Retention

A. Objects

1. Display a small number of similar objects; cover display; child enumerates objects in display.
2. Same activity as number 1; increase number of objects.
3. Display a small number of dissimilar objects, cover display; child enumerates objects in display.
4. Same activity as number 3; increase number of objects.

NOTE: Allow a set exposure of five or three seconds for all the activities. Continue to decrease exposure to the lowest possible time limit.

B. Pictures of objects

1. Display pictures of a small number of similar objects; cover pictures; child enumerates objects.
2. Follow rest of sequence as in A.

C. Pictures of grouped objects

1. Display picture of grouped similar objects; cover picture; child enumerates objects.
2. Follow-through with rest of sequence

D. Letters – upper case

1. Display card with small number of *dissimilar* letters; cover card; child enumerates letters in sequence presented on card.
2. Same activity as number 1; increase number of dissimilar letters.
3. Display card with small number of similar letters; cover card; child enumerates letters in sequence presented on card.

E. Letters – lower case

Same sequence as D

F. Letters – upper case

Same sequence as D but in this activity, child records exposed upper letters

G. Letters – lower case

Same sequence as F but in this activity, child records exposed lower-case letters.

H. Words

1. Display card with small word; cover card; child says word then records it.
2. Continue activity increasing size and difficulty of words.

I. Phrases

Same activity as H using phrases; begin with commonly associated words.

Examples: Good morning!
What time is it?
How are you?
Come in the morning.

Increase difficulty of activity by using less commonly associated words.

UNIT II CHAPTER 7

SEQUENCE OF LANGUAGE ANALYSIS SKILLS

SECTION 1: THE CONSONANT SEQUENCE

In the Preface to The Handbook it was noted that three Subskills, 1, 2, and 4 (Consonants, Vowels and Word Structure) of Basic Skill 2 (Language Analysis) are structured to indicate the three discrete progressions of content which are presented in the following order: The Consonant Sequence, The Vowel Sequence, and The Word Structure Sequence.

This order of presentation is somewhat arbitrary even though language analysis instruction usually begins with consonant sounds, proceeds to vowel sounds and finally to word structure. There is a connectedness to these elements of langauge analysis that dictates the simultaneous instruction of all three – consonants, vowels and word structure. Therefore, the sequences are to be used horizontally rather than vertically. The vertical progression of these three language analysis elements was intended to facilitate teacher-awareness of item relatedness within each sequence and to delineate language analysis content that is requisite for proficiency in decoding. The teacher should feel free to select items out of sequence when his instructional needs or the child's academic needs require him to do so.

The Consonant Sequence is directed toward the use of consonants as information-bearing cues in the decoding process. The order of presentation attempts to parallel the series of skills provided for children's instruction in the elementary school. Other factors that have governed the development of the sequence are the frequency and infrequency of the consonant's use, the phonic regularity of the consonant, and the quantity of instruction that can be generated by the use of a consonantal element.

The fragment of the Taxonomy that is applicable to the content of the Consonant Sequence has been reproduced below. For complete understanding, this section must be seen within the matrix of the total Taxonomy. Each item in this sequence is coded Basic Skill 2 (Language Analysis), Subskill 1 (Consonant). By deleting the taxonomic language terms the number code for these items is 21 – plus a third digit indicating the level at which each item is generally taught.

THE WHAT OF INSTRUCTION

Basic Skill	Basic Subskills	Sequential Levels
2. Language Analysis	1. Consonants	1. Grades 2 and Below
	2. Vowels	2. Grades 2-4
	3. Sight Vocabulary	3. Grades 4-6
	4. Word Structure	4. Grades 6 and Above
	5. Syntax	

I. Order of Teaching Single Consonant Sounds

A. In the Initial Position:

1. M-T-B-H-P-N

When the child has learned to discriminate these initial consonants, both visually and auditually, instruction in the next group of letters is begun.

2. D-W-G (hard sound as in game) -K-C (hard sound as cot) -J

NOTE: K and hard C have the same sound. The pupil must ultimately learn the spelling rule that governs the use of the two letters, but it is not necessary to introduce the rule at this level.

RULE: The letter K is used for the sound of /K/ before the vowels E-I-Y (kitten, kettle, kid, kylix). The letter C is used for the sound of /K/ before A-O-U (cat, come, cut).

This rule is in effect because the letter C when it precedes the vowels E-I-Y has the soft sound of /S/ (cell, city, cycle).

There are, of course, exceptions to the rule governing the use of K and C before the vowels, but the exceptions are uncommon words of little relevance to our elementary school population. Some of the exceptions are:

kaolin, kafir, kamikaze, karakul, koala, kohlrabi, koran, kurdish

NOTE: The letters G and J have the same sound when G is followed by either E, I or Y (gentle, gin, gym). There are a number of common word exceptions to this rule such as

girl get give gift giggle gear gill geese

but there are enough soft G words for the teacher to provide instruction of the rule. There will be a restatement of the soft G sound rule at a more advanced level of the sequence. At this point of phonic mastery, the child should be taught the sound of hard G as in game, goose, goat, gun, gum.

3. Combine practice in the two groups of letters:

a) M-T-B-P-H-P-N

and

b) D-W-G (hard sound) -K-C (hard sound) -J

for reinforcement practice and facility of recall before proceeding to the next group of letters.

4. F-L-R-S

NOTE: S has two main sounds: /S/ /Z/. At this level of instruction, emphasis is on the consonant sound in the initial position of a word. S at the beginning of a word always had the /S/ sound as in sat.

5. Combined practice in the three groups of letters:

a) M-T-B-P-H-P-N

b) D-W-G (hard sound) -K-C (hard sound) -J

c) F-L-R-S

When visual and auditual mastery has been achieved, instruction in the next group of letters is undertaken.

6. V-Y-Z

NOTE: X – This letter in the initial position has been omitted from the sequence. The vocabulary of initial position X words (xylophone, xenon, xylem) has little utility for the child at this level of instruction, and the /Z/ sound of the initial position X word has no correspondence with the usual sound of medial and final positon X words /KS/ as in box. Therefore, instruction will begin with X in the final position.

Y – The letter Y is considered a consonant only in the initial position and is always followed by a vowel (yes, yawn, yield, youth).

B. In the Final Position

1. M-T-B-P-N
2. D-G-K
3. F-L-R-S-Z
4. V-X

NOTE: X – In the final position of a word the letter X has the sound of /KS/.

Examples: box tax ox lax

Orthographically, the letter V in the final position is always followed by the letter E.

Examples: brave cave dive starve stove

NOTE: A number of letters have been omitted from the list of consonants for which practice in visual and auditual discrimination in the final position should be provided. The reasons are as follows:

H – Words do not end in H. This letter in the final position is usually combined with S or C to form SH and CH. In these combinations the H sound loses its characteristic sound. Care must be taken not to introduce SH and CH at this point of instruction.

W – The sound characteristics of W in the final position are different from its sound in the initial position. The final position W sound is greatly affected by the preceding vowel. The final W sound should be reserved for a more advanced level of instruction. At this level, words ending in final W (saw, show) should be taught as sight words.

J – There are too few words ending in J to justify the time spent in instruction. Most, if not all, of the words ending in final J are foreign words, and the final J sound has little correspondence with the initial J sound.

X – Final position X (tax) has the sound of /KS/ which is unrelated to its initial sound of /Z/. Instruction in the final /KS/ sound should be postponed to avoid confusion.

Y – Y in the initial position functions as a consonant, but in the final position functions as a vowel with a number of different sounds (fly, baby). The vowel sounds of Y are included in the long vowel sound sequence.

NOTE: There are a few special features of some consonants in the final position that require instructional emphasis for the child.

K – Usually the final sound of /K/ is written as CK after a single vowel that has a short sound (jack, deck, pick, sock, luck). Picnic is an exception to this rule. If the final sound of /K/ follows a long vowel sound, it is usually represented by the letter K (soak, like, seek).

In writing monosyllabic short vowel sound words ending with the letters F-L-S-Z the letters are often doubled (cliff, mill, bass, fuzz). The doubled letter retains the sound of the single letter.

Some exceptions to the rule are: is, yes, if, bus, us, of.

The letter R sometimes fits this pattern (purr), but most often does not. In addition, the vowel sounds are not short in the double R words.

Extreme care must be taken with the final S sound which is not constant. The letter S frequently has a /Z/ sound. There is no rule that provides a constant clue to identify the sound of S, but the following rules may be helpful:

Rule 1: An S following the letters P-T-K-F and TH has the sound of /S/ (tops, rats, myths). After all other consonants the S has a /Z/ sound (bugs, crabs, calls).

Rule 2: Words that end in ise (advise, exercise, surprise) sound as if they end in ize.

Rule 3: An S following a long vowel sound or a vowel diphthong may be pronounced as if it is a Z (pose, tease, poise).

C. In The Medial Position

Traditionally, teachers emphasize visual and auditual discrimination of consonants in the initial and final positions. Too little attention is devoted to developing the child's discrimination of single or doubled single consonants in the medial position. Research confirms the information value of single consonants in the initial and final positions, but seems to have neglected investigating the value of developing the child's perception of the consonant in the medial position. Any practice that expands the child's phonic clue repertoire is worth pursuing.

Special care should be used in selecting the vocabulary for medial consonant training. At this level, single consonants or doubled single consonants should be used to reinforce sound – symbol association medial combinations should be avoided.

Examples: M in the medial position – stammer or taming rather than stamping.
D in the medial position – ladder or riding rather than children

D. Practice in discriminating the consonants in the three positions.

II. Order of Teaching Two Letter Consonant Blends.

NOTE: Consonant blends consist of combinations of two or more consonants wherein each consonant maintains its own distinctive sound.

A. In the Initial Position

1. BL as in black
   FL as in flag
   PL as in plan
   ST as in step
   CL as in clip
   GL as in glass
   SL as in slip
   SP as in spin
2. BR as in brick
   DR as in drag
   GR as in grip
   CR as in crop
   FR as in frog
   PR as in prim
   TR as in trip

NOTE: The sound of /KL/ in the initial position as in clip, closet, class is usually represented orthographically by the letters CL. There are so few English words spelled with the letters KL in the beginning position that this blend has been omitted from the list of consonant combinations. The same is true of the KR blend. A rule of good constancy can be formulated from this observation.

RULE: The sound of /K/ before the consonants R and L in most words is represented by the letter C (clip, class, clown, close, cram, crab, crib, cross).

3. SM as in smash — SN as in snip
SC as in scat — SK as in skip

CAUTION: The child in learning these blends often inserts a schwa /ə/ sound between the consonants as in ful. Mastery of the blending skill is achieved only when the child is able to pronounce the component consonant sounds in such quick succession that the insertion of the schwa sound is precluded. Then the unaccented vowel sound (the schwa) is usually emitted after the consonant sounds as is /FLə/.

RULE: Use of SC or SK

SK is used before the vowels E-I-Y (sketch, skip, sky).
SC is used for the sound of /SK/ before the vowels A-O-U (scat, scold, scuff). An outstanding exception to the rule is skate.

4. DW as in dwell — SW as in swim
TW as in twig

NOTE: The suggested order in which to present the two letter consonant blends is arbitrary. If the teacher finds a need to present these blends in another sequence, there is freedom to do so. Order of presentation should be based on the child's needs rather than on an arbitrary sequence. The advantage of the suggested progression originates in the scheme of not varying the consonant in second place, thereby providing large groups of similar blends for practice in visual and auditual discrimination and in mouth geography.

NOTE: Rate of presentation must proceed as a function of the child's mastery of each blend. Introduction of new blends should not take precedence over reinforcement practice of learned blends. These two types of instruction should be presented concurrently.

B. In The Final Position – SK-SP-ST

NOTE: Only three consonant blends, SK-SP-ST, used in the initial position are to be found without modification in a final letter position (skunk – mask; spit – lisp; step – pest). Instruction in visual and auditual discrimination of final consonant blends should be restricted to SK, SP and ST because all the other consonant blends listed in II A 1, 2, 3 and 4 are to be found as word endings only in association with a vowel, usually the e (br – member; gr – danger; dr – ladder; pl – staple; bl – stable; fl – trifle). Pronouncing these words will yield immediate awareness of the profound change in consonant blend sound that is caused by the addition of the e. Teaching these blends in the final position does not yield reinforcement of initial consonant blend learning since the sounds of these blends in the two positions are not comparable. However, these consonant combinations in the final position have sequential placement at a more advanced level of instruction, and will be found in a later section of the *Handbook*.

There are other consonant combinations that function in the final letter position of words, and these are included in the vowel instruction sequence because the final consonant blends are more easily mastered in conjunction with the vowel that precedes them.

C. In The Medial Position

NOTE: Extensive practice in discriminating consonant blends in the medial position can be provided since there is a large vocabulary containing the blends in this position.

The words are at a fairly high level of reading competency: surprise, extract, reply, include, complain, debrief. The teacher should exercise precaution in selecting the children to whom the skill is presented. The most appropriate point of introduction to the medial blends is coincidental with instruction in syllabication.

Care must be exerted in selecting vocabulary items illustrative of blends. The positioning of two letters together within a word does not necessarily signal a blend. Upon syllabication the letters may be incorporated into different syllables thus weakening the articulation of the blend.

Examples: dis-tal, dis-tant, dis-temper

III. Consonant Digraphs

NOTE: Consonant Digraphs are combinations of two consonants wherein the characteristic sound of each of the consonants is merged to form a new distinctive speech sound as /SH/ in ship.

A. In The Initial Position:

1. CH SH TH (voiced)

NOTE: Of this group of consonant digraphs only SH has a one to one relationship with its sound. TH has two sounds, voiced and voiceless, as in there and thin. Although the body of voiceless TH words is much larger than the voiced, the latter is selected for instruction first because many of the important sight words begin with a voiced /TH/ (that, those, this, then, there, these).

The digraph CH is the most difficult of all the consonant digraphs as it orthographically represents three distinct sounds in the initial position:

/CH/ as in chip
/K/ as in chrome
/SH/ as in chef

The /CH/ sound as in chip is sequenced for instruction first because the largest number of CH words has this sound.

2. TH (voiceless) – WH – PH

NOTE: Teachers are trained to pronounce the WH digraph as /HW/ (where). This practice is a nicety of standard English-irrelevant for some of our students in the elementary grades. It is suggested that the speech sound of /W/ be considered an acceptable response for the WH digraph.

In some WH words, the /W/ of the combination is silent and only the /H/ sound is heard. These few words will be discussed in the section, Silent Letters in The Initial Position.

Initial position PH represents in practically all cases the sound of /F/ as in phone. In a few uncommon words of restrictive usage, the PH combination is silent (phtalic – thal.ic). Instruction at this level should be confined to the /F/ sound of PH in the initial position. Silent PH should be completely excluded from the phonic sequence.

B. In The Final Position

NOTE: All of the consonant digraphs listed for sequencing in the initial position are not found as linguistically lawful combinations in the final position. For instance, there is no English word that ends with the WHO combination. Other consonant digraphs are to be found with modifications in the final position, and the letter combination of GH has been added to the instructional sequence of consonant digraphs in the final position.

1. CH – SH – TH (voiced)

NOTE: CH – The final /CH/ sound as in peach is orthographically represented in two ways: CH, TCH (coach, hitch, preach, scotch). Analysis of those words in which T has been attached to CH to represent the sound of /CH/ yields a rule that has few exceptions.

RULE: A short vowel sound immediately followed by the /CH/ sound requires the insertion of a T between them:

crotch instead of croch
ditch instead of dich
hatch instead of hach
etch instead of ech

The exception to this rule is watch. The A in watch does not have the short /A/ sound (at).

A short vowel followed by another consonant makes the insertion of the t unlawful:

drench French gulch hunch stanch

The /CH/ sound following any vowel sound other than the short sound (long vowel, vowel diphthong) is represented by the letters CH without the T.

coach couch each grouch leach mooch
much ouch poach pooch pouch teach

NOTE: TH – The voiced final TH sound is usually followed by a silent e as in bathe, breathe, clothe, soothe. Exceptions to this practice are smooth and with.

2. TH (voiceless) – PH – GH

NOTE: There are no problems with final voiceless TH as in bath, oath, north. There is a fairly large vocabulary from which to draw examples.

Final PH requires no additional qualifications. The final sound is the same as the initial sound /F/.

GH – In the final position GH has two sound variations:

silent as in sigh; /F/ as in cough, laugh, rough, tough, trough.

C. In The Medial Position

The consonant digraphs in the medial position present no particular instructional difficulties. Their sound – grapheme associations are constant, and there are many words to use for illustrative purposes:

mushroom blushing branching brother hatchet weather
bashful faithful breathing alphabet methods machine

NOTE: Again in the medial position, there is the orthographic tch representing the /CH/ sound. The child has faced this unique combination before in the final position. Since the same rule applies to the /CH/ sound in both positions, the medial TCH should be viewed as providing reinforcement practice of the rule.

In the medial position instruction can include the two sounds of TH (voiceless – method; voiced – brother) without making reference to the difference between the two sounds. Previously in the instructional sequence, no distinction was made, but the TH words were grouped according to the voiced or voiceless quality of the TH sound. Now in this part of the sequence, even the grouping is considered unnecessary.

IV. Special Cases:

A. Single Consonant Sound Variations:

1. C – The letter C has two sounds, /K/ as in cat; /S/ as in cent. The /K/ sound of the letter C is taught first, and the rule governing this sound is to be found in the early section of this sequence under the numbers, IA 2. There is also a rule governing the /S/ sound of the letter C that is stated as follows:

RULE: The sound of the letter C when followed by either E-I-Y is /S/ as in cent. The rule holds true for any position of the letter in the word: initial, medial, final.

Examples in the initial position:

cent cinder civil ceiling cement cycle

Examples in the medial position:

excellent specimen spaceship recent

Examples in the final position:

assistance residence dance juicy

It is suggested that instruction in this particular skill should follow the following sequence:

..... practice in and mastery of the /S/ sound of C in the initial position

..... integrative practice in the /K/ and /S/ sounds of C in the initial position (candy – cinder)

..... practice in and mastery of the /S/ sound of C in the final position

..... integrative practice in the /K/ and /S/ sounds of C in the final position (antic – dance)

..... reinforcement practice in the /S/ sound of C in either the initial or final position (central – dance)

..... integrative practice in the /K/ and /S/ sounds of C in either the initial or final position (central – dance – attic – cute)

..... practice in and mastery of the /S/ sound of C in the medial position

..... integrative practice in the /K/ and /S/ sounds of C in the medial position (declaim – incite)

..... reinforcement practice in the /S/ sound of C in either one of the three positions (central – recent – dance)

..... integrative practice in the /K/ and /S/ sounds of C in either one of the three positions (cylinder – coffee – incomplete – incident – dice – public)

NOTE: The /K/ sound of C can be found distributed within a word in more than one position.

Examples: Clinic (2) clerical (2) climatic (3)

The parenthesized figures indicate the number of times the /k/ sound is represented by the letter C in the word.

The /S/ sound of C can be found distributed within a word in more than one position.

Example: celibacy (2)

The sounds, /K/ and /S/, represented by the letter C can be found within a word simultaneously.

Examples: accent conceive coherence cordial

The order of the C sounds in these words is first /K/ and then /S/. The C sounds need not follow this order in all words. There are many words in which the /S/ sound comes first and then the /K/ sound.

Examples: circus circulate Celtic ceramic certificate circumference

In the word circumference the C sounds are distributed /S/, /K/, /S/.

All the variations of this phonic skill should be taught when the child has mastered the more basic elements of the phonic sequence, and when he is ready to be exposed to the highly sophisticated vocabulary that illustrates the rule of soft C. The order in which instruction should be presented is as outlined above. One final point, as described below, needs to be included in this unit.

NOTE: The words used for practice at this point of phonic mastery should include the letters C and S. If it is desirable, the first phase of instruction can restrict the letter C to the sound of /K/ while the letter S represents the sound of /S/.

Examples: discomfort artistic describe

or in reverse order of sounds.

Example: consider consist console

The next step in the progression is to use words in which the letters C and S represent the sound of /S/.

Examples: descend disciple secede cerise cessation

In the last step, the words should contain the letters C and S with no restriction of the sound as represented by C.

Examples: consequence success concise condescent conspiracy consonance

2. G – The letter G has two sounds, /G/ as in game; /J/ as in gin. The /G/ sound of the letter G is taught first, and the rule governing this sound is to be found in the early section of this sequence under the numbers, IA 2. There is also a rule applicable to the /J/ sound of the letter G that is stated as follows:

RULE: The sound of the letter G when followed by E-I-Y is /G/ as in game. The rule holds true for any position of the letter in the word: initial, medial, final.

Examples in the initial position:

gentle giant giraffe gypsy gender

Examples in the medial position:

budget cogent digit digest frigid ginger

Examples in the final position:

aged arrange challenge divulge engage refuge

A progression similar to the one outlined for the letter C is suggested for the letter G. It is not as easy to implement as soft C because there seems to be a smaller vocabulary of soft G words. However, careful utilization of the vocabulary permits:

..... practice in and mastery of the /J/ sound of G in the initial position

..... integrative practice in the /G/ and /J/ sounds of G in the initial position (game – George)

..... practice in and mastery of the /J/ sound of G in the final position

..... integrative practice in the /J/ and /G/ sounds of G in the final position (rage – tag)

..... reinforcement practice in the /J/ sound of G in either the initial or final position (gymnasium – rampage)

..... integrative practice in the /J/ and /G/ sounds of G in either the initial or final position (gentle – page – adage – clog)

..... practice in and mastery of the /J/ sound of G in the medial position

..... integrative practice in the /J/ and /G/ sounds of G in the medial position (digest – ingot)

..... reinforcement practice in the /J/ sound of G in either one of the three positions (genius – hygiene – infringe)

..... Integrative practice in the /J/ and /G/ sounds of G in either one of the three positions (generosity – gossip – legend – repugnant – manage – stag)

NOTE: The sound of /J/ can be spelled three ways: the letter J, the letter G when it is followed by either an -E-I- or Y, the two-letter combination of DG. The latter cannot be found in the initial position. The use of DG to represent the sound of /J/ can be found in the medial and final positions. There is a fairly stable rule covering its use.

RULE: The sound of /J/ is orthographically represented by DG after a short sounding vowel.

Examples: judge bridge budge dodge

If the vowel is short sounding but is followed by another consonant, the sound is represented by GE.

Examples: lunge hinge cringe

NOTE: The /G/ sound of G can be found distributed within a word in more than one position.

Examples: gag (2) gurgle (2) giggle (2)

The parenthesized figures indicate the number of times the /G/ sound is represented by the letter G in the word.

The /J/ sound of G can be found distributed within a word in more than one position.

Example: ginger

The sounds, /G/ and /J/, represented by the letter G can be found within a word simultaneously.

Examples: gorge gauge geography regurgitate

All the variations of this phonic skill should be taught when the child has mastered the more basic elements of the phonic sequence, and when he is ready to be exposed to the rather sophisticated vocabulary that illustrates the rule of soft G. The order in which instruction should be presented is as outlined above. One final point, as described below, needs to be included in this unit.

NOTE: The words used for practice at this point of phonic mastery should include the letters J and G,

Examples: jugular subjugate jaguar joggle

but it is impossible to provide for these letters a methodical sequence similar to the one used for the letters K and C. The corpus of words in which both the letters J and G are included is much smaller than the K – C corpus.

3. Q – In writing, the letter Q is always followed by the letter U, and is usually sounded as a blend of the letters K and W, /KW/.

   Examples in the initial position:

   quaver queen quiet quote

   Examples in the medial position:

   frequent conquest tranquil sequel propinquity

NOTE: The sound of QU, as noted previously, is usually the blended sound of /KW/, but in some words the /KW/ sound is separated into its component sounds of /K/ and /W/.

Example: liquid (lik wid)

Progression for instruction should be as presented above: initial QU followed when mastered by medial QU.

NOTE: Final QU has been omitted from the sequence because in our orthographic system it is written as QUE and in our speech system it is sounded as /K/.

Examples: critique physique mystique unique

This distinctive speech feature of QU should be taught only when the child has attained the levels of reading proficiency and ideation at which the vocabulary is utilized.

4. X – There are some refinements of the letter X sound to which the proficient reader should be exposed.

   The sound of X in the accented syllable of EX is the sound of its name (EKS).

   Examples: ex/ple/tive ex/pi/ate ex/pur/gate

   The sound of X in the unaccented syllable of EX is usually /IKS/, but can be EKS.

   Examples: ex/per/ience ex/ten/sive ex/ter/mi/nate

   In both the /EKS/ and /IKS/ sounds, the /S/ component tends to accompany the second syllable.

   X in an unaccented syllable of EX when followed by a vowel or syllable beginning with H has the sound of /IGZ/ or /EGZ/.

   Examples: ex/act/ly ex/ag/ger/ate ex/is/tence ex/hil/a/rate ex/ist

   The /Z/ sound component of /IGZ/ and /EGZ/ has the tendency to be associated with the second syllable.

   X in the word anxious represents the sound of /KSH/, while in luxurious it represents /GZH/.

   These sound variations and others of X should be taught as the occasion arises.

5. S – There are some variations in the sound of the letter S of which the proficient reader should become aware: /SH/ . /Z/ . /ZH/.

   /SH/: sure, insure, assure, pressure

   /Z/: presume, resident, peasant, president, perusal

   /ZH/: measure, leisure, Jesuit, treasure

6. Z – A /ZH/ sound variation is also present for the letter Z but less frequently than for S.

   Examples: azure seizure

B. The sound Variations for the Digraph CH.

NOTE: The most common sound of the CH consonant digraph is the sound of /CH/ as in chin and its instructional placement is early in the phonic sequence. The digraph CH has two other speech sounds that are placed at this advanced level of phonic instruction:

1. /K/ is written as CH in any one of the three positions – initial, medial, final – in words derived from the Greek language.

   Examples: chemical mechanic headache

2. The /SH/ sound is represented by CH in any one of the three positions – initial, medial, final – in words derived from the French language.

   Examples: chaise chambray chamois chandelier chassis chauvinism chauffeur cloche sachet

V. Three-Letter Consonant Combinations.

SCR:	scramble	screw	scrumptious		
SHR:	shrapnel	shrew	shrill	shrine	shrub
SPL:	splatter	spleen	splendid	splint	splurge
SPR:	spray	spread	sprung	sprout	spruce
SQU:	squad	squadron	squeeze	squint	squire
STR:	strain	stream	strong	struck	struggle
THR:	thrall	thread	three	throw	through

NOTE: Although the vocabulary of three-letter consonant words is not very large, it does contain some items of common utility such as three, threw, spring. These words should be taught whenever the need arises, but extensive practice in three-letter consonant words should be reserved for the advanced level of phonic training.

As the list indicates, the three-letter consonant combinations are to be found primarily in the initial position. While none are in the final position, a few are placed medially.

Examples: constrain construct restrictive enthrall enthrone resplendent postscript

Care must be exercised in choosing words to illustrate the medially placed three-letter consonant blends. Such words among others as – distribute, display, displease – would be inappropriate exam- to use. Syllabication of these words demonstrates a split in the three-letter blends (dis-trib-ute, dis-play, dis-please). Instruction should enable the child to attend to the prefix first and then the root which, in each of these words, begins with a two-letter blend.

Embrace, intrude, inflate are extreme examples of the point being made. No one would suggest to a child that he attempt to blend the three consecutive consonants embedded in these words. The first step in decoding the words would be to divide them into syllables. Syllabication clarifies the blends and reduces the sounding-out effort.

Instruction in medially-placed three-letter consonant blends should be accompanied by practice in syllabication.

VI. The Silent Letters

Placement of silent consonants as the last item in the phonic sequence is not to imply insignificance to the acquisition of this skill. The silent letters are found in words that vary considerably in the frequency of their occurrence in the spoken and written language to which children are exposed, and therefore, vary in their importance to the child. Consequently, it is for the teacher to select for instruction the silent letter rule and the illustrative items that are appropriate at progressive levels to the child's needs.

A. The Silent Letter in Consonant Combinations

1. At the Beginning of Words

   a. WR: W before R is always silent.

   Examples: wrap wreath wrench wring wrist write wrong wry

   b. KN: K before N is always silent.

   Examples: knack knave knee knew knife knight knock knot know knuckle

   c. GN: G before N is always silent.

   Examples: gnarl gnash gnaw gnome

NOTE: The silent G of GN can occur in the medial and final positions as in consignment, sign, design. In the medial position, the G is silent only if the letters are not separated by rules of syllabication into different syllables as in sig/nal, sig/ni/fy, des/ig/nate.

   d. RH: H after R is always silent.

   Examples: rhapsody rheostat rhetoric rheum rheumatic rhinocerus rhombus rhyme

   e. GH: H after G is always silent.

   Examples: ghastly ghetto ghost

2. Not At the Beginning of Words.

   a. BT: B before T in the same syllable is silent.

   Examples: debt doubt subtle

NOTE: Again the distinction is made that the silence of B before T depends on the letters being in the same syllable. When separated into different syllables, both letters are sounded.

Examples: sub/tract sub/tra/hend sub/ter/fuge

   b. LK: L before K is silent.

   Examples: walk talk chalk stalk

   c. MB: B after M in the same syllable is silent.

   Examples: bomb comb lamb limb numb tomb

NOTE: When separated into different syllables, both letters are sounded.

Examples: bom/bard lam/bast rhom/boid

   d. MN: N after M in a single syllable is silent.

   Examples: hymn condemn

NOTE: Placement of the two letters in different syllables requires the sounding of both M and N.

Examples: hym/nal con/dem/na/tion

e. GH: In the phonograms, IGH-IGHT-AUGHT-OUGHT, the GH combination is silent.

Examples: sigh thigh bright flight caught daughter fought

NOTE: Sometimes the GH in OUGH, as noted previously, has the sound of /F/.

Examples: cough enough rough tough

B. The Consonant Letter That is Silent at Times

1. H as in honesty, hour, exhaust, exhibit, exhort
2. T as in glisten, hasten, listen, thistle, whistle
3. W as in answer, whole, who, whom, whose, sword
4. S as in aisle, isle, island

UNIT II CHAPTER 7

SEQUENCE OF LANGUAGE ANALYSIS SKILLS

SECTION 2: THE VOWEL SEQUENCE

The Vowel Sequence based on Subskill 2 (Vowels) of Basic Skill 2 (Lanugage Analysis) is directed toward the use of vowels as information-bearing cues in the decoding process. Its content is to be presented concomitantly and integratively with the content of The Consonant Sequence.

The factors that regulated the order of item presentation are the same for both sequences: correspondence with the skills as taught in the elementary grades, frequency of use prior to infrequency, phonic regularity prior to phonic irregularity and large-pattern generating phonic elements prior to small-pattern generating elements.

The section of the Taxonomy that is relevant to the content of The Vowel Sequence has been reproduced below. The reader is reminded that the section has been abstracted to facilitate his understanding of a small part of the Taxonomy's operation. To evolve a comprehensive picture of the total operation, the section needs to be relocated within the Taxonomy's total structure. Each item in this sequence is coded 22 – plus a third digit indicating the level at which it is generally taught.

THE WHAT OF INSTRUCTION

Basic Skill	Basic Subskills	Sequential Levels
2. Language Analysis	1. Consonants	1. Grades 2 and Below
	2. Vowels	2. Grades 2-4
	3. Sight Vocabulary	3. Grades 4-6
	4. Word Structure	4. Grades 6 and Above
	5. Syntax	

I. Short Vowel Sounds

Somehow it seems appropriate to begin short vowel sound instruction with the sound of letter a. There is, of course, nothing absolute about this choice. If the teacher has a good reason for starting with a different vowel, he should feel free to do so.

There is another question involved here though, one that is represented by two points of view. It is being suggested that for children of our population, the emotionally disturbed – socially maladjusted, the short sound of one vowel should be overlearned before receiving instruction in another. The issue is the choice of the second vowel. Should the second vowel be in near or far contrast to the first one? As stated before, there are two points of view regarding this question. One view holds that instructional use of near contrastive sounds facilitates the discriminatory process. The other view sees the use of near contrastive sounds as inhibitory.

In the end, it is a rather academic issue since the ultimate task is for the child to discriminate all the short vowel sounds, but it has been our experience that near contrastive sounds disturb facilitation. Consequently, the sequence is developed on far-contrastive vowel sounds.

A. Short sound of the vowel a

1. Introduce cue word to pupil.

NOTE: Careful note should be taken of the word that is used to cue the short vowel sound. For the short a sound the word is ăt. Once the cue word has been selected, no other word should be used as a substitute.

In many cases, the cue word is learned before the short sound is isolated from the word. Practice eventuates the discrimination of the sound without referral to the cue word.

An additional cue is provided by the use of the breve, a diacritic in the shape of a shallow curve, that signals the short vowel sound – ăt.

2. Provide practice in associating the sound with the symbol and using the diacritic.
3. Continue practice until there is evidence of overlearning – almost 100% correct responses – before proceeding to instruction in the next vowel sound.

B. Short sound of the vowel i

1. Introduce cue word, it, to the pupil.
2. Provide practice in associating the sound with the symbol and using the diacritic.
3. Continue practice until there is evidence of overlearning.

C. Review short a sound.

D. Provide practice in discriminating short a /ă/ and short i /ĭ/ sounds.

E. Introduce short sound of vowel u as in up, the cue word.

..... Follow the three steps evolved for short a /ă/ and short i /ĭ/.

F. Review short a and short i sounds.

G. Provide practice in discriminating all three sounds: /ă/, /ĭ/, /ŭ/.

H. Introduce short sound of vowel o as in on, the cue word.

..... Follow the three steps evolved for the other vowels.

I. Review /ă/, /ĭ/, /ŭ/.

J. Provide practice discriminating all four sounds: /ă/, /ĭ/, /ŭ/, /ŏ/.

K. Introduce short sound of vowel e as in egg, the cue word.

..... Follow the three instructional steps as outlined previously.

L. Review /ă/, /ĭ/, /ŭ/, /ŏ/.

M. Provide practice discriminating all the short vowel sounds.

NOTE: The pupil should be lead to formulate the following rule: If the vowel in a monosyllabic word is between consonants, it will usually generate its short sound.

Examples: cat, tip, mop, cut, pet

II. Special Cases of the Short e Sounds

The short e sound in combination with certain final consonants can be taught as having the sound of the final consonant's name. Pupil awareness of this fact may facilitate the acquisition of these sounds, and provide a stable sound unit for blending initial and final consonants.

A. Ef - El - Em - En - Es - Ex

1. ef says the name of the letter F.
2. el and ell say the name of the letter L.
3. em says the name of the letter M.
4. en says the name of the letter N.
5. es says the name of the letter S.
6. ex says the name of the letter X.

B. Blending initial and final consonants with these special short e sound units

1. ef (says the name of the letter f) + t = eft — left
2. el (says the name of the letter l) + d = eld — held, weld
   el (says the name of the letter l) + f = elf — elf, self
   el (says the name of the letter l) + m = elm — helm
   el (says the name of the letter l) + p = elp — help
   el (says the name of the letter l) + t = elt — belt, pelt
3. em (says the name of the letter m) + p = emp — hemp
4. en (says the name of the letter n) + d = end — lend, send
   en (says the name of the letter n) + s = ens — lens
   en (says the name of the letter n) + t = ent — bent, rent, sent, went
5. ex (says the name of the letter x) + s = sex

NOTE: Each of these sound units does not have the same blending value for generating one syllable words, but all of them should receive equal instructional emphasis because of their value in analyzing multisyllabic words. For the use of ex as saying the name of the letter x, it is suggested that the teacher refer to the consonant section in which variations in the sound of x are reported. The combination ex is susceptible to sound shifts caused by the letter immediately following the letter x.

III. The Short Vowels with Final Consonant Combinations

In The Consonant Sequence of the *Handbook*, reference was made to a group of two-letter consonant combinations that are lawful only in the final position of a word. It was suggested then that these final consonant blends are more easily taught in association with the short vowels.

The following enumeration of blends and vowels provides the teacher with a checklist of instructional units. As the child progresses through the short vowel sounds in association with single final consonants, the appropriate items on this list should be used.

A. Short a in association with final consonant combinations

1. act — fact, pact, tact, tract
2. aft — daft, raft, craft, draft, shaft
3. amp — camp, damp, lamp, ramp, tamp, vamp, champ, clamp, cramp, scamp, stamp, tramp
4. and — band, hand, land, sand, bland, brand, grand, stand, strand
5. ang — bang, fang, gang, hang, pang, rang, sang, clang, slang, sprang

6. ank – bank, lank, rank, sank, tank, yank, blank, clank, crank, drank, flank, frank, plank, prank, spank, swank, thank, shrank

7. ant – cant, can't, pant, rant, chant, grant, plant, shan't, slant

B. Short e in association with final consonant combinations

Most of the short e phonograms have been discussed in Section II B 1-5 of The Vowel Sequence. One phonogram, /ĕct/ was reserved for placement here.

Ect seems to generate only one monosyllabic word through blending (sect), but it is present as the second syllable in a number of disyllabic words.

..... Ect – bi/sect, de/fect, dis/sect, e/lect, in/fect, in/ject, in/sect, re/ject, sub/ject

NOTE: Care should be taken to refrain from the use of the ion form of these words for with the addition of the suffix ion, the rules of syllabication require that the c and t be separated and thus the sound pattern is modified.

dis-sec-tion, in-fec-tion, re-jec-tion

C. Short i in association with final consonant combinations

The first phonogram /ĭct/ can be similarly characterized as /ĕct/. Although it generates no monosyllabic words, it is present in a number of disyllabic words. The note of caution regarding the addition of the suffix ion is as applicable to /ĭct/ as to /ĕct/.

1. ict – addict, constrict, convict, depict, inflict, restrict
2. ift – gift, lift, rift, sift, drift, shift, swift, thrift
3. ilm – film
4. ilt – hilt, jilt, tilt, wilt, quilt, spilt, stilt
5. imp – limp, blimp, chimp, crimp, primp, skimp, scrimp, shrimp
6. ing – king, ring, sing, wing, bring, cling, fling, sling, sting, swing, thing, wring, spring, string
7. ink – jink, kink, link, mink, pink, rink, wink, blink, brink, clink, drink, slink, stink, think, shrink
8. int – dint, lint, mint, tint, flint, quint, stint, squint, splint, sprint

D. Short o in association with final consonant combinations

The sound of o is very influenced by the sound pattern of the succeeding letter, and a wide variation in the sound of o is effected. Therefore, there is only one rather unproductive phonogram to list.

..... omp – pomp, romp, stomp

E. Short u in association with final consonant combinations

1. ump – bump, dump, hump, jump, lump, pump, rump, sump, chump, clump, crump, frump, grump, plump, slump, stump, trump
2. unch – bunch, hunch, lunch, munch, punch, brunch, crunch, scrunch
3. ung – bung, dung, hung, lung, rung, sung, clung, flung, slung, stung, swung, wrung, strung
4. unk – bunk, dunk, hunk, junk, punk, sunk, chunk, clunk, drunk, plunk, skunk, spunk, stunk, trunk, shrunk
5. unt – bunt, hunt, punt, runt, blunt, brunt, grunt, stunt

IV. Short Vowels in Combination with Final sk, sp, st

These consonant blends which are lawful in the initial and final positions of words were included in The Consonant Sequence. It is suggested that this point in the vowel sequence provides an opportunity to review these consonant blends in the final position. The phonograms and the appropriate vocabularies are listed below for the teacher's convenience.

A. Short a phonograms

1. ask – ask, bask, cask, mask, task, flask
2. asp – asp, gasp, rasp, clasp, grasp
3. ast – cast, fast, last, mast, past, vast, blast

B. Short e phonograms

1. esk – desk
2. est – best, jest, lest, nest, pest, rest, test, vest, west, zest, blest, chest, crest, quest wrest

NOTE: The child should be reminded that the es combination says the name of the letter s.

C. Short i phonograms

1. isk – disc or disk, risk, brisk, frisk, whisk
2. isp – lisp, wisp, crisp
3. ist – fist, gist, list, mist, whist, wrist

D. Short o phonograms

There are no short o phonograms to list. Previous mention has been made of the o sound variability caused by the letter preceding or following the o. Two examples of the point being made are:

p + ost = post /pōst/
i + ost = lost /lost/

Neither word has the short o sound.

E. Short u phonogram

1. usk – dusk, husk, musk, tusk, brusk or brusque
2. ust – bust, dust, gust, just, lust, must, rust, crust, trust, thrust

V. Short Vowels in Combination with Final Digraphs – sh, ch, th

These consonant digraphs which are lawful in both the initial and final positions of words were included in The Consonant Sequence. It is suggested that this point in the vowel sequence provides an opportunity to review these digraphs in the final position. The phonograms and the appropriate vocabularies are listed below for the teacher's convenience.

A. Short a phonograms.

1. ash – ash, bash, cash, dash, gash, guash, hash, lash, mash, rash, sash, brash, clash, crash, flash, slash, smash, stash, trash, splash, thrash
2. atch – batch, catch, hatch, latch, match, patch, thatch, scratch

NOTE: A rule for insertion of the T has been provided in The Consonant Sequence. This rule applies to all the short vowels.

3. ath — bath, lath, math, path, wrath

B. Short e̲ phonograms

1. esh — mesh, thresh
2. etch — etch, fetch, ketch, retch, vetch, wretch, sketch, stretch
3. eth — Beth, Seth

C. Short i̲ phonograms

1. ish — dish, fish, wish, squish, swish
2. itch — itch, bitch, ditch, hitch, witch, stitch, switch

NOTE: The word rich is an exception to the rule of inserting the letter T between a short sounding vowel and the digraph CH.

D. Short o phonograms

1. osh — bosh, gosh, josh, slosh
2. otch — botch, notch, blotch, crotch, scotch

E. Short u̲ phonograms

1. ush — gush, hush, lush, mush, rush, blush, brush, crush, flush, slush, thrush
2. utch — dutch, Dutch, hutch, clutch, crutch

NOTE: The words much and such are exceptions to the rule of inserting the letter T between a short sounding vowel and the consonant digraph CH.

VI. Long Vowel Sounds

In a sense, the long vowel sounds are simple to learn because only gross auditual discrimination is required of the child. The long vowel sounds are the names of the vowels, a concept that poses neither difficulty in articulating nor comprehending.

Confusion arises from the orthographic system that signals the vowel sound. There are many ways to write the long vowel sounds. It is to this concept that the child must be exposed, and in which he must gain manipulative proficiency.

The long vowel sequence begins with the rule of final e which when used with one-syllable words is neat and unmarred by many exceptions. Again, as in the short vowel sequence, emphasis is placed on the child overlearning one long sound before proceeding to the next. Although near learning one long sound before proceeding to the next. Although near and far contrastive vowel sounds are of no significance at this point of development, since long vowels are in far contrast to each other, the suggested instructional sequence remains the same.

..... Overlearn first long vowel sound /ā/ as in cake.

..... Introduce the second vowel sound and overlearn second sound /ī/ as in like.

..... Review first vowel sound /ā/

..... Provide discriminative practice in vowel sounds one and two /ā/ and /ī/.

..... Introduce third long vowel sound /ū/, cube; overlearn /ū/.

..... Review vowel sounds, one and two /ā/ and /ī/.

..... Provide discriminative practice in vowel sounds, one, two and three /ā/, /ī/ and /ū/.

..... Introduce fourth long vowel sound /ō/, note; overlearn /ō/.

..... Review vowels /ā/, /ī/, /ū/.

..... Provide discriminative practice /ā/, /ī/, /ū/, /ō/.

..... Introduce /ē/, Pete; overlearn /ē/.

..... Review /ā/, /ī/, /ū/, /ō/.

..... Provide discriminative practice /ā/, /ī/, /ū/, /ō/, /ē/.

NOTE: Use of the macron, the diacritic, a small dash over the vowel, is recommended to provide a visual cue to the vowel sound.

A. Rule of final e

In the body of a one-syllable word when the sequence of letters follows the pattern of vowel-consonant-final e, the final e is silent and signals that the vowel should be sounded long.

1. Long a caused by final e

a. āce: face, lace, mace, pace, race, brace, grace, place, space, trace.

NOTE: The sound of C in these words is following the rule that C before E-I-Y has the soft sound of /s/.

b. āde: fade, jade, made, wade, blade, glade, grade, shade, spade, trade.

c. āge: age, cage, page, rage, sage, wage, stage.

NOTE: The sound of G in these words is following the rule that G before E-I-Y has the soft G sound of /J/.

d. āke: bake, cake, fake, lake, make, rake, sake, take, wake, brake, drake, flake, quake, shake, snake, spake, stake

e. āle: ale, bale, dale, gale, hale, male, pale, sale, tale, vale, scale, shale, whale

f. āme: came, dame, fame, game, lame, name, same, tame, blame, flame, frame, shame

g. āne: cane, lane, mane, pane, sane, wane, vane, crane, plane

h. āpe: ape, cape, gape, nape, rape, tape, drape, grape, shape, scrape

i. āse: base, case, vase, chase

NOTE: Vase can be pronounced either vās or vāz. There are no alternative pronunciations for the other items. The /S/ sound of the S in these words is unusual as S is frequently sounded as /Z/ when it follows a long vowel sound.

j. āste: baste, haste, paste, taste, waste

k. āte: ate, bate, date, fate, gate, hate, late, mate, pate, crate, grate, plate, skate, slate, state

l. āthe: bathe, lathe, swathe

m. āve: cave, gave, pave, rave, save, wave, brave, crave, grave, knave, shave, slave, stave

2. Long i caused by final e

a. īce: dice, ice, lice, mice, nice, rice, vice, slice, spice, splice, thrice

NOTE: The sound of C in these words is following the rule that C before E-I-Y has the soft sound of /S/.

b. īde: bide, hide, ride, side, tide, wide, bride, chide, glide, pride, slide, snide, stride

c. īfe: fife, life, wife, knife, strife

d. īle: bile, file, mile, pile, rile, tile, vile, smile, stile, while

e. īme: dime, lime, mime, time, chime, clime, crime, grime, prime, slime

f. īne: dine, fine, line, mine, pine, wine, brine, shine, swine, whine, shrine

g. īpe: pipe, ripe, wipe, gripe, snipe, swipe, tripe, stripe

h. īre: dire, fire, hire, ire, mire, pire, sire, tire, wire, spire, squire

i. īse: rise, vise, wise

NOTE: Vise, pronounced vīs, is an exception to the rule of S having the /Z/ sound when it follows long vowels.

j. īte: bite, cite, kite, mite, site, quite, smite, spite, sprite, trite, white, write

k. īve: dive, five, hive, jive, live, rive, chive, drive, strive, thrive

3. Long ō caused by final e

a. ōbe: lobe, robe, globe, probe

b. ōde: bode, code, lode, mode, node, rode

c. ōke: coke, joke, poke, woke, yoke, broke, choke, smoke, spoke, stoke, stroke

d. ōle: dole, hole, mole, pole, role, sole, stole

e. ōme: dome, home, tome

NOTE: The two most frequently used ome words, some and come, have a short u sound /sŭm/, /cŭm/. They should be taught as sight words early in the phonic sequence.

f. ōne: bone, cone, hone, lone, pone, tone, zone, crone, drone, prone, scone, shone, stone, throne

NOTE: Exceptions to the long o sound of /ōne/ are done /dŭn/, gone /gŏn/, one /won/. They should be taught as sight words, and care should be taken to omit these words from practice in long o sounds.

g. ōpe: cope, dope, hope, lope, mope, pope, rope, grope, scope, slope

h. ōse: dose, hose, nose, pose, rose, chose, close, prose, those

NOTE: Lose and whose are exceptions to the rule.

i. ōte: mote, note, rote, tote, vote, quote, smote

j. ōve: cove, hove, clove, drove, grove, stove, strove

NOTE: Exceptions are dove /dŭv/, love /lŭv/, glove /glŭv/, prove /pruv/.

4. Long ū caused by final e

The long ū sound poses many problems. There are slight variations that prevent the sound from saying the name of the letter u. Care has to be taken to list appropriate items for practice. Variations of the long ū sound will be discussed in a later section of the sequence.

a. ūbe: cube /Kyüb/, tube /T/(y)üb/

b. ūde: dude /d(y)üd/, nude /n(y)üd/

c. ūle: mule /myül/, yule /yü(∂)1/

d. ūme: fume /fyüm/

e. ūne: dune /dyün/, tune /t(y)ün/

f. ūse: fuse /fyüz/, muse /myüz/, use /(yüz or yüs)/

NOTE: The dictionary spellings above have been included to show that it is necessary to insert a /y/ sound immediately before the u in order to make the long u sound. Wherever the /y/ sound is in parenthesis, it indicates that it is common practice to omit this sound. The omission changes the sound of the letter u; it no longer says its name in which case the words should be deleted from the list of examples.

5. Long e caused by final e

This orthographic method of signaling the long e sound generates so few examples that it is fruitless to provide a systematic listing of items. Pete and mete are the best examples of long e caused by final e.

NOTE: This point in the vowel sequence provides an excellent opportunity to develop short and long vowel word pairings that clearly demonstrate the effect of the final e on the preceding vowel.

..... Short ă- Long ā Word Pairs

băd – bāde   făd – fāde   măd – māde

* * * * * *

găg – sāge /gaj/   răg – rāge /raj/
săg – sāge /saj/   wăg – wāge /waj/   stăg – stāge /staj/

NOTE: In this group of words, it is important to note there are two changes caused by the final e; not is the vowel sound modified by shifting from short a /ă/ to long a /ā/, but the G sound shifts from hard G as in rag to soft G as in rage /rāj/.

* * * * * *

dăm – dāme   Săm – sāme
tăm – tāme   shăm – shāme

* * * * * *

căn – cāne   măn – māne
păn – pāne   plăn – plāne
văn – vāne

* * * * * *

găp – gāpe   năp – nāpe
răp – rāpe   tăp – tāpe
scrăp – scrāpe

* * * * * *

ăt — āte
hăt — hāte
păt — pāte
săt — sāte

făt — fāte
măt — māte
răt — rāte
slăt — slāte

spăt — spāte

* * * * * *

..... Short i — Long i Word Pairs

hĭck — hīke

lĭck — līke

pĭck — pīke

NOTE: It was noted in The Consonant Sequence that the final /K/ sound is usually represented by the letters CK unless the /K/ sound is represented by the letter K which then is followed by final silent e. The words above are precise examples of this pattern. Therefore, in these word pairings, there are two changes caused by the final e: CK to K, short i sound to long i sound.

* * * * * *

bĭd — bīde
rĭd — rīde

hĭd - hīde
slĭd · slīde

* * * * * *

bĭll — bīle
mĭll — mīle
rĭll — rīle
wĭll — wīle

fĭll — fīle
pĭll — pīle
tĭll — tīle
stĭll — stīle

NOTE: In this grouping of words, there is an orthographic as well as a sound change; one of the double L's is dropped before adding the final silent e.

* * * * * *

dĭm — dīme

Tĭm — tīme

slĭm — slīme

* * * * * *

dĭn — dīne
pĭn — pīne
tĭn — tīne
shĭn — shīne

fĭn — fīne
sĭn — sīne
wĭn — wīne
spĭn — spīne

* * * * * *

pĭp — pīpe
grĭp — grīpe
strĭp — strīpe

rĭp — rīpe
snĭp — snīpe
trĭp — trīpe

* * * * * *

bĭt – bīte
sĭt – sīte
spĭt – spīte
kĭt – kīte
quĭt – quīte
whĭt – whīte
wrĭt – wrīte

NOTE: In the words writ and write, the child is to remember that letter W before the letter R is silent.

..... Short o – Long o Word Pairs

rŏb – rōbe
glŏb – glōbe

cŏck – cōke
blŏck – blōke
smŏck – smōke
pŏck – pōke
chŏck – chōke
stŏck – stōke

NOTE: In this group of words as in ick-ike word pairs, the ck - ke pattern is evident. Therefore the final e can be said to cause two changes: ck to k, short o sound to long o sound.

cŏd – cōde
nŏd – nōde
mŏd – mōde
rŏd – rōde

cŏp – cōpe
lŏp – lōpe
pŏp – pōpe
hŏp – hōpe
mŏp – mōpe
slŏp – slōpe
tŏp – tōpe

dŏt – dōte
nŏt – nōte
tŏt – tōte

..... Short u and Long u Word Pairs

cŭb – cūbe
tŭb – tūbe

dŭd – dūde

bŭt – būtte
cŭt – cūte
mŭtt – mūte

NOTE: The word pair, cut-cute, is the only perfect example in this group of the final e effect. The two other word pairs are marred by orthographic changes. Mutt-mute follows the expected orthographic pattern noted in the phonograms ill to ile (mill-mile).

It was noted in The Consonant Sequence that certain final consonants are doubled when written – cliff, mill, toss. This is not the pattern for final T words except for mitt and mutt.

B. Two Vowels Together – Another Orthographic Pattern Signaling The Long Vowel Sound

When two vowels are positioned one immediately after the other (ai, ay, ee, ea, oe), the first vowel usually says its name, and the second one is silent.

1. Long ā represented by ai

   a. āid: aid, laid, maid, paid, raid, braid, staid
      Exceptions: said /sled/, plaid /plad/

   b. āil: ail, bail, fail, hail, jail, mail, nail, pail, rail, sail, tail, wail, frail, grail, quail, snail, trail

   c. āim: aim, maim, claim

   d. āin: gain, lain, main, pain, rain, vain, brain, chain, drain, grain, plain, slain, stain, swain, train, sprain, strain

   e. āit: bait, gait, wait, plait, trait, strait

2. Long ā represented by ay.

   bay, day, gay, hay, jay, lay, may, nay, pay, ray, say, way, bray, clay, flay, fray, gray, play, pray, slay, stay, sway, tray, spray, stray

3. Long ē represented by ee

   a. ēe: bee, fee, gee, see, tee, wee, flee, free, glee, knee, thee, tree, spree, three

NOTE: If the word knee is used to illustrate the long e sound of ee, the silence of K before N should be reiterated.

   b. ēech: beech, leech, breech, speech, screech

   c. ēed: deed, feed, heed, need, reed, seed, weed, bleed, breed, creed, greed, speed, steed

   d. ēef: beef, reef

   e. ēek: meek, peek, reek, seek, week, cheek, creek, sleek

   f. ēel: eel, feel, heel, keel, peel, reel, kneel, steel, wheel

NOTE: Again, there is the silent K before N in the word kneel

   g. ēen: keen, seen, teen, green, preen, queen, sheen, screen, spleen
      Exceptions: been /bĭn/.

   h. ēep: jeep, keep, peep, seep, weep, creep, sheep, sleep, steep, sweep

   i. ēet: beet, feet, meet, greet, sheet, skeet, sleet, sweet, street

4. Long e represented by ea

NOTE: The ea signal of long e is not as stable as the ee pattern. There are many more exceptions. These and their special sound patterns have been noted.

   a. ēa: flea, plea

   b. ēach: each, beach, leach, peach, reach, teach, bleach, breach, preach

   c. ēad: bead, lead, mead, read, knead, plead

Exceptions: dead, head, lead, read, dread, tread, spread, thread.

NOTE: There is a special sound pattern to these exceptions. The ea combination signals the short e instead of the long e sound. This exceptional pattern is repeated with other final consonants. At the end of this section, the exceptions are subsumed under their special sounds.

It is important to note that the words, lead and read, are included in both of the lists, regular and exceptional. These words have two pronunciations (lēd — lĕd, rēad — rĕd) which are determined by the context in which the words are used.

d. ēaf: leaf, sheaf
Exception: deaf /dĕf/

e. ēak: beak, leak, peak, weak, bleak, creak, freak, sneak, speak, squeak
Exceptions: wreak, break /brāk/, steak /stāk/

NOTE: The ea combination of these two exceptions has the sound of long ā.

f. ēal: deal, heal, meal, peal, real, seal, zeal, squeal, steal

g. ēam: beam, ream, seam, team, cream, dream, gleam, steam, scream, stream

h. ēan: bean, dean, jean, lean, mean, wean, clean

i. ēast: beast, east, feast, least

j. ēat: beat, eat, feat, heat, meat, neat, peat, seat, bleat, cheat, pleat, treat
Exceptions: great /grāt/, threat /thrĕt/, sweat /swĕt/

k. ēath: heath, sheath, wreath (rēath)
Exceptions: death /dĕth/, breath /brĕth/

5. The ER Exceptions

Usually when two vowels such as ea are placed one after the other, the first vowel says its name and the second is silent. Therefore, ea should be sounded as long ē (eat).

In the case of ea, there are many exceptions. The following section lists these exceptions according to the two sound patterns into which they can be grouped. Multisyllabic words are included in the listing.

a. Ea sometimes signals the short e sound.

Examples: dead, head, lead, read, dread, tread, spread, thread, instead
sweat, threat
feather, heather, leather, weather
health, wealth, stealth
measure, pleasure, treasure
heaven, leaven
cleanliness, dealt, jealous, meadow, meant, peasant, pheasant, weapons, breakfast, treachery

NOTE: Cleanliness with its short e sound is a particularly interesting word since the root word, clean, follows the rule of final e by having a long e sound.

b. Ea sometimes signals the long a sound.

Examples: break, great, steak

6. Long o represented by oa

   a. ōach: coach, poach, roach, broach, approach, encroach
   b. ōad: goad, load, road, toad
   c. ōaf: loaf
   d. ōak: oak, soak, cloak, croak
   e. ōal: coal, foal, goal, shoal
   f. ōam: foam, loam, roam
   g. ōan: loan, moan, roan, groan
   h. ōap: soap
   i. ōast: boast, coast, roast, toast
   j. ōat: boat, coat, goat, moat, oat, bloat, float, gloat, throat
   k. ōath: loath, oath

7. Long o represented by oe

   Examples: doe, foe, hoe, roe, sloe, toe, woe
   Exception: shoe /shü/

8. Interesting Irregularities of The Two Vowel Rule

NOTE: It is important to remember that the rule of two vowels written side-by-side states, the first vowel says its name and the second is silent. By rule, then, the vowel combination of ie should signal the long i sound, but ie is an esception to the rule. It has a pattern unique to itself. Below is a discussion of the vowel combinations ie and ei.

a. The case of ie and ei

..... ie usually signals the sound of long e (chief).

..... ei sometimes signals the sound of long e (ceiling).

The question, then, is what determines the use of these vowel combinations. The rule is as follows:

RULE: Use i before e except after c; then after c use e before i.

Examples – ie:

chief, thief
brief, grief

believe, relieve
grieve, retrieve
reprieve, achieve

field, yield
wield, shield

niece, piece

priest, fiend
siege, shriek

Examples – ei:

ceiling, conceit
deceit, receipt
perceive, conceive
deceive, receive

Exceptions to ie signaling the long e sound: friend, /friĕnd/, sieve /sĭv/

Any word in which the ie is also followed by an r is an exception because production of the r sound necessitates modification of the preceding sound.

pier, tier, fierce, pierce

b. The case of ei by itself

Ei has the sound of long ā under certain conditons.

..... When the vowels ei are followed by GH or GHT, it is the signal for the long ā sound.

Examples: weigh, sleigh, neigh, neighborhood, inveigh, eight, freight, weight

NOTE: As has been noted previously in The Consonant Sequence, GH and GHT are often silent.

..... When the vowels ei are followed by an n or gn, it is the signal for the long a sound.

Examples: vein, rein, skein, feint, reign, deign, feign

NOTE: When the combination ei is followed by gn, it is the same as being followed by n only because g before n is silent.

C. Two Visual Cues in One Word

We find in some words two visual cues, a combination of vowels and a final e that seem to call for the production of the same sound. This is a seeming redundancy that can generate spelling errors unless each cue is analyzed for its function within the word. Most of the difficulty rests with the final e, the function of which is not always to indicate the long vowel sound of the first vowel. Often the final e has another purpose; it may control the sound of the preceding consonant or consonant digraph. These examples will clarify the point:

seethe, breathe, sheathe, wreathe

All of these words have vowel combinations that signal the long sound of the first vowel and the silence of the second. In each of these words, the final e has no relationship to the sound of the first vowel. Its purpose is to herald the sound of the th digraph as voiced instead of voiceless. In this shift of sound process, there is a coincidental shift in the structural function of three of the words from noun to verb.

breath (noun with voiceless th) to breathe (verb with voiced th)
sheath (noun with voiceless th) to sheathe (verb with voiced th)
wreath (noun with voiceless th) to wreathe (verb with voiced th)

Another group of words demonstrates still further the final e functioning as the control for the preceding consonant sound.

peace, piece, niece, fleece

These words have the same orthographic features as the first examples – a vowel combination and final e. Again, the vowel combination signals the vowel sound, while the final e indicates the C has a /S/ sound.

NOTE: The vowels ie are an exception to the two consonant rule. Instead of saying the name of the letter i, they sound the name of the letter e.

For another word pattern, the final e has a purely structural function. Some of the words following this orthographic pattern are:

ease, cease, lease, tease, crease, grease, please

Since the S sound in this pattern is unstable, shifting from /S/ to /Z/, the final e cannot be viewed as a stable signal for the S sound. In these cases, the presence of the letter e replaces the S as the final letter in the word. Except for a few words (does, has, is, miss, kiss, etc.), a final S indicates noun pluralism or verb tense and number. It may be, therefore, that final e also functions as a negative sign indicating the word's noninvolvement with pluralism and tense.

And lastly, the final e functions as a tradition. No word in English ends in final V. Therefore, the letter V is followed by the silent final e as in:

eave, heave, leave, weave, cleave, peeve, sleeve

This function of final e with slight modification is descriptive of words that end with the letter Z. In these words either the Z is doubled or a final e is added.

buzz, fuss, breeze, freeze, squeeze, tweeze, wheeze

D. Long Sounds Made by Final Single Vowels

There are two vowels which when used in the final position generate their long vowel sounds: /ē/ and /ō/.

1. The case of sigle final e as long ē

RULE: Single final e when it is the only vowel in the word signals the long sound of e – its name.

Examples: be, he, me, we, ye, she

Exception: the (which is usually pronounced /thə/)

2. The case of single final o as long ō

RULE: Single final o when it is the only vowel in the word signals the long sound of o – its name. Unfortunately, o is not as stable a signal as e, and it generates almost as many exceptions to the rule as regular items. Nevertheless, the rule should be taught because of its effective application as a signal in analyzing the vowel sound of syllables. The use of the rule in syllabication is detailed in the third section of *the Handbook* entitled Structural Analysis.

The exceptions to the rule should be taught as sight words.

Examples: so, no, go

Exceptions: to (tü), do (dü)

NOTE: There are, of course, multisyllabic words ending in final o which acts as a signal for the long ō sound.

piano, embargo, indigo, ratio, cargo, manifesto

VII. The Special Case of Y

Y in its function as a consonant was detailed in the first section of *the Handbook* – The Consonant Sequence. It was noted then that Y is considered a consonant when its placement is in the initial position of a word, and as a consonant has a one-to-one relation with its sound.

Y in either the medial or final position, or in both positions simultaneously, functions as a vowel, and signals three sound possibilities: long ī, short ĭ, long ĕ.

Some of the Y position-sound relations are stable; others are not. The detailing of the rules governing the Y position-sound relations begins with those rules which are characterized by constancy.

A. Y in the final position

RULE: 1. Y as the only vowel in a word indicates the long ī sound.

Examples: by, my, cry, dry, fly, fry, ply, pry, sky, sly, spy, sty, thy, try, why, wry

NOTE: W before R is silent as in wry.

RULE: 2. Y as the final letter in multisyllabic words signals the sound of long ē.

Examples: baby, lady, fairy, ferry, many, phony, envy, ivy, wary, very, gypsy, mystery, tyranny, lucky

NOTE: In the words – gypsy, mystery, tyranny – the letter Y holds two positions; only the final Y has long ē sound.

Y in the final position can be coupled with a preceding e. In these instances, the Y still acts as a signal for long e.

Examples: key, monkey, turkey, money, honey

NOTE: To complete the description of Y coupled with e in the final position (ey), it must be noted there are exceptions to the signal of long e. In some words, final ey signals long ā as in hey, obey, prey, they, whey.

RULE: 3. Y by itself or in association with the letter l (ly) functions as a suffix. Again it signals the long ē sound.

Examples of Y as a suffix: lucky, dirty, waxy, sleepy

Examples of ly as a suffix: friendly, queenly, slowly

B. Y in the medial position

In this position, Y does not offer a constant signal. Sometimes it indicates a short i sound, and at other times a long i sound. There are some patterns that provide cues, but they are of such complexity as to be unsuitable to the elementary school learner.

Examples of medial Y signaling short ĭ:

myth, syllable, sylvan, typical, tyranny, mystic, mystery, hymn, hypnosis, gypsy

Examples of medial Y signaling long ī:

nylon, hydrant,hygiene, gyrate, typhoid, tyrant, tycoon

NOTE: The child has many vocabularies, the largest of which is his listening vocabulary. This vocabulary can be of assistance to the child in selecting the appropriate sound for medial Y. It should be suggested that he try both sounds, short ĭ and long. It is possible that his trials will elicit the appropriate Y sound from his listening vocabulary.

VIII. Common Phonograms That Are Easily Taught

A phonogram is a sequence of letters that has the same phonetic value in many words (and, sand, land). Phonograms tend to facilitate instruction and learning because they are taught as units rather than as blends of individual letters.

Each phonogram is taught separately by demonstrating the formation of new words through the blend of the phonogram with initial consonants, consonant digraphs and consonant blends, but reinforcement practice of the mastered phonogram(s) is provided throughout the procedure.

If the phonogram lends itself to the technique of final blendings (ar+t = art), then instruction in this skill should be offered upon the completion of the initial blendings.

A. Ar signals the name of the letter R.

1. Examples with initial blends:

bar, car, far, jar, mar, par, tar, char, scar, spar, star

Exception: war

NOTE: Judicious selection of vocabulary items will permit the child to use the ar signal in multisyllabic words. In order to do so, both letters must fall within the same syllable. There are, of course, exceptions to this pattern which is affected by syllable stress. Usually the R sound is signaled by the letters ar, if the syllable is stressed and if another R or vowel does not immediately follow the ar (barrel, arrow, barren). Although there are exceptions to this pattern, too, sufficient regularity is present to justify instruction in this skill using an advanced vocabulary.

. . . . . 'bar-be-cue, 'bar-ber, 'car-cass
'far-ther, 'far-ci-cal, 'jar-gon
'mar-ble, 'mar-gin, 'par-cel, 'tar-get

2. Examples with initial and final blends.

a. ar+d = ard
bard, card, guard, hard, lard, yard

NOTE: When the letter G is followed by the letter u and another vowel, the us is frequently silent as in guard.

'car-di-ac, 'guard-ian, 'hard-en, 'lar-der, 'yard-age, 'tar-dy

NOTE: Frequently the final consonant is separated from the ar phonogram, but this practice does not effect any change in the sound of ar.

b. ar+f = arf
scarf

c. ar+ge = arge
barge, large, sarge

'lar-gess, 'mar-gin

d. ar+k = ark or arc
ark, bark, dark, hark, lark, park, shark, spark, stark

'arc-tic, 'dark-en, em-'bark, 'spar-kle, 'par-ka

e. ar+l = arl
snarl

'par-lia-ment,'par-lor, 'mar-lin, 'star-ling

f. ar+m = arm
arm, farm, harm, charm

Exceptions: warm, swarm

'ar-ma-ment, 'ar-my, 'har-mo-ny, 'farm-er

g. ar+n = arn
barn, darn

Exceptions: warn

'tar-nish, 'var-nish, 'gar-nish

h. ar+p = arp
carp, harp, Tarp, sharp

'car-pet, 'car-penter, 'tar-pau-lin
'har-poon, 'sharp-en

i. ar+t = art
art, cart, dart, mart, part, tart, chart, smart, start

Exceptions: quart, wart

'ar-te-ry, 'ar-ti-cle,'art-ist,
'car-ton, 'car-toon, 'par-ti-tion,
'Tar-tan, 'char-ter, 'star-tle

j. ar+ch = arch

arch, larch, March, parch, starch

B. The all phonogram

1. Examples with initial blends

ball, call, fall, hall, mall, pall, tall, wall, small, squall, stall

Exception: shall

2. Examples with final blendings

NOTE: Although a sequence of three consonants letters can be found embedded in the body of a word (construction), it is linguistically unlawful for an English word to end with such a sequence. Therefore, in order to blend the "all" phonogram with final consonants, it is necessary to delete the last l, but the sound of the remaining letters (al) continues unchanged.

a. al+d = ald to be sounded as if alld
bald, scald

b. al+t = alt to be sounded as if allt
halt, malt, salt

C. The ild phonogram

The phonogram ild does not seem to stem from ill as ald does from all. There is no correspondence of vowel sound; ill has a short ǐ sound, ild a long ī. All other il forms (ilt, ilk, ilm) have the short ǐ sound as in ill. The ild phonogram is unique. There are only a few examples of this phonogram.

mild, wild, child

NOTE: Two of the examples have another unique characteristic, a shift in vowel sound from long i to short when suffixes are added.

chīld to chǐldren
wīld to wǐlderness

D. The oll phonogram — long o

1. Examples with initial blends

poll, roll, toll, droll, knoll, troll, scroll, stroll

Exceptions: doll, loll

2. Examples with final blends

NOTE: The note appended to the section dealing with the "all" phonogram is also relevant in this case. One of the L's is deleted to permit addition of another final consonant.

a. ol+d = ōld with the o having a long sound
bold, cold, fold, gold, hold, mold, sold, told, scold

b. ol+t = ōlt with the o having a long sound
bolt, colt, dolt, holt, jolt, molt, volt

NOTE: The addition of prefixes and suffixes to the above words would provide the child with a multi-syllabic vocabulary to practice these sound patterns.

polling, bolder, coldest, refold, unfolded, golden, behold, remold, untold, scolded, molten, voltage

IX. Diphthongs

A diphthong is a vowel combination that signifies the production of a gliding speech sound which starts near the articulatory position of the first vowel and moves toward the position of the second vowel.

The diphthongs are oi, oy, oo, ou, au, aw, ew, ue, ui.

A. The oi and oy dipthongs have identical phonetic values because they are produced by the same articulatory movements. Once learned the sound poses no problem as it is quite constant and common. Confusion arises from the inability to perceive the singular feature that regulates the use of these diphthongs in written language. The regulating feature is the diphthong's position in the word.

RULE: When the root word contains the diphthong followed by a consonant or consonant blends, the oi signal is used as in boil, but when the diphthong itself holds the final position in the root word or is followed by a vowel, the oy combination becomes the signal for the production of the diphthong sound as in boy.

1. The diphthong followed by a consonant or consonant blends – oi

Examples: boil, broil, coin, foil, foist, hoist, joint, joist, moist, noise, oil, point, poise, soil, toil, voice, void

choice, droit, spoil

adroit, appoint; avoid, boiler, cloister, foible, jointly, noisy, recoil, rejoice, rejoin, toilet, toiling, uncoil, unspoiled

Exceptions: boycott, oyster

2. The diphthong in the final position of the root word or followed by a vowel – oy

Examples: boy, coy, joy, Roy, soy, toy, alloy, bellboy, boyhood, boyish, clairvoyant, convoy, cowboy, decoy, deploy, destroy, employ, employment, envoy, enjoy, enjoyment, royal, royalty, loyal, disloyal

B. Diphthongs au and aw

The au and aw diphthongs have identical phonetic values because they are produced by the same articulatory movements. Unfortunately, these diphthongs, unlike oi and oy, offer no simple, single feature by which to differentiate their use in writing.

However, a number of orthographic patterns provide insight to this difficult discriminative task. The patterns are based on positional distinctions, sound blends and the number of syllables.

1. Positional distinctions

RULE: a. initial position

When a word begins with the diphthongal sound, there is a good degree of certainty that the word will also begin with the letters au.

Examples: auburn, auction, audible, August, autumn, author, auspices

and

the aut or auto words such as autocrat, autogamy, autograph, automatic, autopsy

NOTE: There are very few words beginning with the letters aw that signal the diphthongal sound.

Examples: awe, awesome, awful, awkward, awl, awn, awning

b. Final position

RULE: When a word ends with the diphthongal sound in all probabilities the word will end with the letters aw.

Examples: caw, jaw, law, paw, raw, saw, claw, draw, flaw, gnaw, squaw, straw

2. Sound blends

RULE: a. The diphthongal sound followed by a single consonant sound is usually represented by the letters aw.

awl, bawl, brawl, crawl, drawl, shawl, trawl, scrawl, sprawl

dawn, fawn, lawn, pawn, brawn, drawn, prawn, spawn

bawd

Exceptions: daub, fraud, laud, faun, caused, pause, sauce

RULE: b. The diphthongal sound followed by the final consonant blends of lt, nt, nch is represented by the letters au.

fault, vault

daunt, gaunt, haunt, taunt, vaunt, flaunt

haunch, launch, paunch, staunch

3. The number of syllables

RULE: In multisyllabic words the diphthongal sound is usually represented by the letters au.

bauble, caudal, caution, claustrophobia, faucet, gaudy, hauteur, nautical, mausoleum, plaudit, plausible, raucous, tautology, vaudeville

Exception: dawdle

NOTE: This rule does not apply to monosyllabic words containing the aw diphthong which, by the addition of either prefixes, suffixes or both, become multisyllabic words.

Examples: law — lawful, unlawful
claw — declawed
flaw — flawless
gnaw — gnawing
drawn — redrawn
bawd — bawdy

4. A special case of the au dipthong

In a few words the diphthong au is joined to a group of letters to form aught, aughty and aughter. These letter sequences are unusual because of the silence of gh. This group of words should be sequenced as a separate unit after the other diphthongal rules are mastered.

aught, caught, taught, naught

haughty, naughty

daughter, slaughter

Exception: laughter /lăf-tar/

NOTE: Words formed from the ought sequence of letters have the identical sound as aught words.

Examples: ought, bought, fought, brought

C. The oo diphthong

The oo diphthong acts as the signal for three different sounds: oo /ü/ as in boo, oo /ü/ as in book, oo /ü/ as in blood. The first sound is the most frequent, and the last is the least frequent.

There are a few orthographic patterns that offer some cues to the task of associating the appropriate sound with the oo diphthong. They are based on position and sound blends.

1. Positional cue

RULE: When a word ends with the oo diphthong, the sound is ü as in boo.

Examples: boo, coo, moo, too, woo, zoo, shoo, bamboo

2. Sound blend cues

RULE: a. When the oo diphthong is followed by the consonant K (ook), it signals the sound of /ük/ as in book.

book, cook, hook, look, nook, rook, took, brook, crook, shook

Exception: spook /spük/

b. When the oo diphthong is followed by all other possible consonants (with the exception of d), consonant blends and consonant digraphs, it signals with minor fluctuation the sound of /ü/ as in boob.

pooch, goof, roof, spoof, cool, fool, pool, school, spool, stool, doom, loom, room, bloom, gloom, groom, loom, moon, noon, croon, spoon, swoon, coop, hoop, loop, droop, scoop, sloop, stoop, troop, goose, loose, noose, papoose, boost, roost, boot, hoot, root, shoot, snoot, booth, smooth

Exceptions: brooch /brōch/, wool /wül/, foot /fu̇t/, soot /su̇t/

NOTE: It is necessary to point out that the letter u signals a sound, in addition to its short ŭ and long ū phonetic values (cŭb and cūbe – kyüb respectively), that is a duplicate of the ü sound of the oo diphthong (cool).

dude, lute, plume, prune, include

Phoneticians may hear a difference between the /ü/ of cool and the /ü/ of rule, but the untrained ear would have difficulty making this distinction.

There seems to be no rule that structures the use of these two signals in writing. Therefore, skillful manipulation of oo /ü/ and u /ü/ must be based on an operative intuitive process that develops from extensive exposure to and practice in the use of this phonetic pair.

c. The oo blend with final d (ood)

Ood has been separated from the other blends because it lacks reliability as a signal. The ood words fall into all of the three phonetic categories: ü as in cool, ū as in coop, and ŭ as in blood.

The entire vocabulary of this blend consists of nine words which can be handled effectively as a separate unit.

Four of the words fall into the same sound category as the words formed from ook /u̇k/.

good, hood, stood, wood

The others signal either ŭ as in blood and flood, or ü as in brood, food, mood.

D. The ou diphthong

This diphthong is a difficult one for the pupil to master and without careful organization of vocabulary presents an equally difficult instructional task for the teacher.

The ou diphthong functions as a signal for seven sounds. The sequence will start with the most frequently signaled sound of ou.

1. Ou as in out

This is the most frequent sound of the ou signal when it comes before the following letters:

ch – ouch, couch, pouch, crouch, slouch, voucher

Exception: touch

d – loud, cloud, proud, shroud

nce – ounce, bounce, flounce, renounce

nd – round, hound, pound, ground

Exception: wound

nt – count, mount, fountain

r – our, hour, sour, flour, scour

Exceptions: four, your, tour

se – house, mouse, arouse, grouse, spouse

st – ouster, rouster

t – out, bout, lout, pout, shout, flout, stout

th – mouth, south

Exception: youth, couth

NOTE: The next group of sounds signaled by ou can be taught as exceptions to the main sound. The vocabulary is grouped to provide the means to do so.

2. Exceptions to the main diphthongal sound

a. Ough words

The sensitivity of these words to vowel and consonant sound shifts creates many problems for the learner.

Ough as long ō (the gh is silent) – dough, furlough, although, thorough

Ought as ȯ (again the gh is silent) – bought, brought, naught, fought, ought, sought, thought, wrought

and

cough (the gh signals a /f/ sound

ough as short ŭ (the gh has a /f/ sound), enough, touch, rough

NOTE: The word through fits none of the ough patterns. The word itself signals a ü sound and silent gh.

b. ould words

ould as u̇d – could, would, should

c. Ou words followed by R sometimes says ȯ

our: four, fourth, pour

ourn: mourn, mourning

ourt: court, fourteen

ourse: course, source

or

ource: discourse, resource, recourse

d. Ou signaling er

journ words: journey, journal, journalist, adjourn, sojourn, adjournment

other: flourish, nourish, courage

e. Ou signaling ü

oup words: coup (silent p), croup, group, soup, coupon

others: rough, route, cougar

f. The ou diphthong in the suffix ous

This suffix is the written symbol for the indefinite vowel sound, schwa, which is like the short ŭ sound. This sound occurs often and regularly.

pompous, gracious, studious, delicious

g. The ou diphthong in multisyllabic words

In this verbal matrix, the ou can signal the schwa again, but the frequency is much less and the regularity poor.

cousin, country, double, trouble

E. The ow diphthong

The letters ow function as the sign for two sounds both of which are signaled by other letters as well. The sounds are long o /ō/ and ou as in cow. Both sounds occur in the medial and final positions. Therefore, there are no positional cues to use in differentiating between the two sounds of the ow diphthong. Since both phonetic values of the diphthong can be blended with the same final consonants, a rule cannot be ordered from this feature. It remains for the teacher to provide the learner with enough practice that facile use of this diphthong is developed.

1. The two sounds signaled by ow

a. ow as ō

bow, low, now, sow, tow, blow, crow, flow, grow, know, show, slow, snow, stow, throw.

..... with the phonetic value of long o /ō/, the diphthong ow can be blended with either the consonant L or N

..... ow /ō/ blended with either L or N

blown, bowl, flown, grown, shown, sown, thrown

b. ow as au

bow, cow, how, now, sow, vow

brow, chow, plow, prow, scow

..... with the phonetic value of au, the diphthong ow can be blended with either the consonant L or N

..... ow /ou/ blended with L or N

cowl, fowl, howl, jowl, owl, growl, prowl

down, gown, town, brown, clown, crown, drown

NOTE: The problem of differentiating between the diphthongs ow and ou when their phonetic value is ou (how and hound) is not as difficult a task as it seems. There are both positional and blending cues to use. The cues are also applicable to use in writing of ow and o as signals of the sound /ō/.

..... positional cue

For the sound of ou in the final position, the diphthong ow is much more frequent. Thou is the only word that comes to mind with the ou diphthong in that position.

For the sound of long o /ō/ in the final position of monosyllabic words, there are these letter representations: o(go), oe(toe), ow(low). Again the diphthong ow is more frequently used to represent long o /ō/.

..... blending cue

The sound /ou/ in the medial position is more frequently represented by the diphthong ou than ow.

The sound of /ō/ in the medial position of multisyllabic words is more frequently represented by the letter o than the diphthong ow.

F. The diphthongs ew and ue

These diphthongs represent the same phonetic values, /yü/ and /ü/. There are no distinctive features to assist the learner in the task of differentiating between them in writing.

1. The sound of /yü/.

a. represented by the diphthong ew.

ewe, dew, few, new, spew, stew, sinew, askew, nephew

b. represented by the diphthong ue

cue, due, hue, sue, imbue

NOTE: The /yü/ sound can also be represented by the letters eu as in deuce, feud, Europe, neural, neutral.

2. The sound of ü.

a. represented by the diphthong ew

blew, brew, crew, drew, flew, grew, screw, shrewd, slew, threw, jewel

b. represented by the diphthong ue

blue, clue, flue, glue, rue, true, accrue

X. Vowels Combined with R

1. Or, Ore, Oor, Our

These letter sequences have the same phonetic value /ȯr/. The first two are phonetically stable; the last two are not.

a. Or has very few words, but it combines with many initial and final consonants to form a large vocabulary of monosyllabic words in which the /ȯr/ sound remains stable.

or: or, for, nor

ord: cord, ford, lord, chord

ork: cork, fork, pork, stork
Exception: work

orm: dorm, form, norm, storm
Exception: worm

orn: born, corn, horn, lorn, morn, torn, worn, scorn, sworn, thorn

ort: fort, port, sort, tort, short, snort, sport

orse: horse
or
orce: force

b. Ore has a fairly large number of words. The final e does not function in its usual pattern; it is silent, and has no affect on the /ȯr/ sound.

ore: bore, core, fore, gore, lore, more, ore, pore, sore, tore, wore, chore, score, shore, snore, spore, store, swore

c. Oor has a few words and poor phonetic stability.

oor: door, floor
Exceptions: boor, moor, poor

d. Our has been discussed in the ou diphthong section. Most of the our words have the diphthongal sound of /au/ as in hour, but there are a few items that can be phonetically classified as /ȯr/.

our: your, four, fourth, fourteen, pour

NOTE: It is important to realize that there are a number of orthographic patterns that represent the /ȯ/ sound: au as in August, ou as in bought, a as in all and now o as in or, ore, oor, our.

2. Air and are represent the same phonetic value /aar/ with the latter generating a larger vocabulary than the former.

   a. air: air, fair, hair, lair, pair, chair, flair, stair

   b. are: bare, care, dare, fare, hare, mare, pare, rare, ware, blare, flare, glare, scare, share, snare, spare, square

      Exception: are /är/

3. Ar, Er, Ir, Or, Ur

   All these vowel-R combinations signal the same sound /ẽr/.

   There are some cues that can be helpful in recognizing the unique features of these units. The cues are based on position and word meaning. Josephine Rudd in *Word Attack Manual* has an excellent unit on the /ẽr/ sound.

   a. Ar signaling the sound of /ẽr/.

      position: in the final syllable

      meaning: words that name what people do
      beggar, liar, burglar

      meaning: descriptive words
      circular, angular, solar

      meaning: words that show direction
      forward, backward, westward

   b. Er signaling the sound of /ẽr/

      position: in any syllable unless followed by an r
      er/mine, en/er/gy, work/er

      meaning: words that mean more than
      shorter, colder, smarter

      meaning: words that name what people do
      preacher, writer, dancer

   c. Ir signaling the sound of /ẽr/

      position: in any syllable when followed by a consonant other than R
      dirty, flirting, confirm, unconfirmed

   d. Or signaling the sound of /ẽr/

      position: in words with the letters wor
      worth, worm, worry, work

      position: in the last syllable of words naming what people do

      meaning: doctor, inventor, mayor

   e. Ur signaling the sound of /ẽr/

      position: in any syllable

      surplus, urgent, burrow, Saturday, disturb, Saturn

NOTE: The most common spelling for the /ẽr/ sound is er.

Ear sometimes signals the /ẽr/ sound as in earl, pearl, early, earth, earn, earnest, search, rehearse, heard.

XI. Silent Vowels.

1. U

   a. In some words when the letter u is followed by a vowel, the u is silent.

      buy, guy, guard, building, guilty

   b. In words ending in gue, the g has a hard sound and the letters ue are silent.

      vague, tongue, morgue, league

2. I

   In some words when the letter i follows the vowel u, the i is silent and the u signals the sound of ü as in bruise, cruise, juice, fruit, recruit

3. Que

   In words ending with que, the q indicates a /k/ sound, and the ue is silent.

   unique, technique, antique

NOTE: Although considerable emphasis has been placed on providing words to illustrate the points made in the sequence, we are in no way implying that words should be taught in isolation. To the contrary, words must be put in context and acquire meaning. Until this step is taken, the process of reading is not being taught. Nothing should be taken for granted with the emotionally disturbed-socially maladjusted child. Even at the simplest level, the teacher should initiate a search for the kernel of thought, and this search should be conducted in a manner that generates sensitivity to language, emotions and ideas.

UNIT II CHAPTER 7

SEQUENCE OF LANGUAGE ANALYSIS SKILLS

SECTION 3: THE WORD STRUCTURE SEQUENCE

The content of this third sequence based on Word Structure (Subskill 4) of Language Analysis (Basic Skill 2) provides the child with a third set of cues to be used in the decoding process of reading. These cues signal a greater amount of meaning than the consonant and vowel cues and the child should learn to interpret the signals.

The term word structure expresses its meaning so precisely that further elaboration and qualification of the term is not necessary. It says what it means: the analysis of words for the structural components that function as cues to the meaning and pronunciation of words.

There are four areas to be covered by a sequence of word structure: inflected forms of words, derived forms of words, compound words and syllabication. Although each of these areas will be treated separately, a combination of them is usually found in words.

Since the same factors (correspondence with the sequence of skills taught in the elementary school, frequency of use, regularity of pattern, and quantity of pattern generated) controlled the progression of the three sequences, parallelism of direction has developed. Therefore, the content of this sequence is to be presented simultaneously with the content of the vowel and consonant sequences. Each item of the sequence is coded 24 __plus a digit from Sequential Levels to indicate the grade at which the item is generally taught.

THE WHAT OF INSTRUCTION

Basic Skill	Basic Subskills	Sequential Levels
2. Language Analysis	1. Consonant	1. Grades 2 and Below
	2. Vowels	2. Grades 2-4
	3. Sight Vocabulary	3. Grades 4-6
	4. Word Structure	4. Grades 6 and Above
	5. Syntax	

I. Inflectional Endings

The endings are s, es, ed, ing, er, est, t, and en. They are used to indicate tense, person, number, possession, and comparison.

A. S – – a signal of tense, person, possession, and number.

1. Tense and person

The addition of s to a verb signals present tense and third person singular.
I see. He sees. I fall. It falls. You play. She plays. You cry. She cries.

NOTE: The rule of changing Y to I, as in cry to cries, is detailed in a later section of the sequence.

B. S — — a signal of possession

1. Used with nouns

   S, as a possessive signal used with nouns, must be accompanied by an apostrophe (the boy's hat). The position of the apostrophe also acts as a signal of number; placement before the S ('S) indicates possession by one person (the boy's hats — the hats of one boy), while apostrophe placement after the S (S') indicates possession by more than one person (the boys' hats — the hats of more than one boy).

2. Used with pronouns

   S as a signal of possession with pronouns poses many problems for the learner. The neat regularity of the possessive S with nouns is not present in its used with pronouns.

   There are pronouns that signal possession: my, your, his, her, its, our, your, their

my hat	our hats
your hat	your hats
his hat	
her hat	their hats
its hat	

   With the exception of its and his, these pronouns, having placement immediately preceding a noun, function as their own signal of possession.

   There is another group of possessive pronouns: mine, yours, his, hers, its, ours, theirs.

   These pronouns do not have to be positioned in front of nouns; they can stand alone and signal possession. All of them with the exception of mine end with an S.

   This book is mine. My socks are dirty. Give me yours. Yours are dirty, too. Give me hers.

   Much attention should be paid to this aspect of possession. A large number of children demonstrate their lack of understanding by their frequent use of the word "mines".

   That's yours; this is mines.

NOTE: The apostrophe in combination with letters other than S signals contraction of a word by the omission of some of the word's letters.

Can't for cannot
(omission of the letters n and o)

Doesn't for does not
(omission of the letter o)

You've for you have
(omission of the letters h and a)

We'll for we will
(omission of the letters w and i)

Some contractions cause more difficulty than others because of their similarity to the possessive forms of pronouns which do not require the use of the apostrophe.

Contractions	Possessive Pronouns
it's (it is)	its (the car had a dent in its fender)
who's (who is)	whose (whose car has the dent in its fender)
they're (they are)	their (they took their car to the service station)
you're (you are)	your (your car needs to be serviced)

C. S – – a signal of number

The concept of plurality, an indefinite number above one, must be developed in the learner.

How many is meant in these sentences:

Cars need gas to run.
She dropped her books.
The lights blew out.

After the concept of plurality of indefinite number is mastered, the concept of plurality of definite number should be introduced.

She dropped two books.
Ten lights blew out.
He ate six doughnuts.

When the concept is mastered, the learner should be exposed to the rules of forming plurals.

RULES: 1. The plural of most words is formed by adding S.

meal – meals, drink – drinks, cat – cats.

2. Es is added to form the plurals of words ending in CH, SH, S, X, and Z.

church – churches, dish – dishes, dress – dresses, box – boxes, buzz – buzzes

3. If the word ends with the letter Y preceded by a consonant, the Y is changed to I and ES is added.

cherry – cherries, ferry – ferries, lady – ladies

Exceptions: For the plural form of proper nouns ending in Y, retain the Y and add an S.

The two Marys looked like twins.
There are four Johnnys in the family.

4. If the word ends with the letter Y preceded by a vowel, the Y is retained unchanged and an S is added.

key – keys, turkey – turkeys, day – days

5. If the word ends in F or FE, change the F or FE to V and add ES.

wolf – wolves, calf – calves, shelf – shelves

NOTE: This rule is marred by such irregularity that the exceptions must receive as much attention as the items of regularity.

sheriff – sheriffs, belief – beliefs

6. The plural of another group of words is formed by a change in the vowel structure of the words.

mouse – mice, man – men, foot – feet

7. EN or REN are added to a few nouns to make the plural form.

ox – oxen, child – children, brother – brethren

8. For some nouns, the singular and plural forms are the same.

deer – deer, moose – moose, sheep – sheep

9. Nouns that end in O do not follow a pattern with sufficient reliability to warrant formulating a rule:

a. Some words with final O have the plural form of ES.

tomato – tomatoes, motto – mottoes, Negro – Negroes

b. Other words with final O have the plural form of S.

banjo – banjos, solo – solos, radio – radios

D. ES – – a signal of tense, person and plurality.

The ES inflectional ending is a constituent part of the S ending; it substitutes for the S ending in the three functions of tense, person, and plurality when the final sound of words require the addition of the ES instead of the S ending.

1. Tense – – present
2. Person – – third person singular
3. Plurality – – more than one

She dresses herself.
He fishes in the brook.
There are many churches in the town.
The hunters trapped five foxes.

RULE: For both plurality and tense, the S ending is replaced by ES when the words end with CH, SH, S, X, and Z.

E. ED – – a signal of past tense

There are, of course, exceptions to the ed signal of simple past tense: run – ran, see – saw, come – came. The instructional sequence must include both the ED signal and the exceptions because the learner is coincidentally exposed to these two aspects of past tense in the early grades.

The ED ending signals not only past tense but three possible phonetic values as well: /d/ /t/ /ed/. The conditions, regulating the production of the three sounds, are sufficiently stable to warrant the formulation of rules.

RULE: 1. ED after D and T signals the sound of /ed/ which is pronounced as a separate syllable. The following list consists of two-syllable words:

bat/ted, blast/ed, bust/ed, cheat/ed, coast/ed, dent/ed, drift/ed, end/ed, fold/ed, grunt/ed, hunt/ed, land/ed, mend/ed, plant/ed, plot/ted, scold/ed, start/ed, trust/ed, weed/ed

2. ED, after /ch/ /f/ /k/ /p/ /s/ /sh/, signals the sound of /t/ which is not pronounced as a separate syllable. The following list consists of one-syllable words.

lunched, punched, stuffed, loafed, picked, parked, sparked, tapped, helped, stamped, dressed, kissed, missed, wished, fished

3. ED signals the sound of /d/ after all other letters including vowels. Again the ED does not form a separate syllable, but is sounded as part of the root word. The following list contains one-syllable words.

pleased, posed, teased, drowned, wedged, shamed, starved, raised, raved, blamed, stayed /ā/, flowed (ō), tied (ī)

F. T – – another signal of past tense.

One group of exceptions to the ED ending as a signal of past tense has been mentioned (run – ran, come — came, know — knew). No pattern of irregularity other than a vowel change is discoverable; every instance appears to be a unique case.

Final letter T, as past tense, is also an exception to the ED signal, but this group of words seems to follow a pattern which is worth noting. Some of the words have two forms of the past participle, a T as well as an ED form. A list of examples is provided: there may be many other words that can be included, and the pattern may be much broader in scope than the list indicates. The final T signal of past tense needs further investigation. For the time being, the list is as follows:

eep words — — sleep — slept
keep — kept
sweep — swept
weep — wept
creep — crept

eel words — — feel — felt
kneel — knelt and kneeled

end words — — spend — spent
lend — lent
bend — bent
rend — rent
send — sent

others — — dwell — dwelt and dwelled
leap — leapt and leaped
learn — learnt and learned

G. ING — — a signal of tense

The past participle, another means of signaling present tense, is formed by adding the ending ING to verbs.

walk — walking
like — liking
pat — patting
speak — speaking

H. ER and EST — — signals of comparison.

The ER ending conveys the meaning of more than, while the EST means the most.

The profound concept at the base of these signals is the quantitative and qualitative relativeness of all things. The teacher, if need be, must assist the learner to achieve an understanding of this concept.

small	smaller (more small)	smallest (most small)
merry	merrier (more merry)	merriest (most merry)
fat	fatter (more fat)	fattest (most fat)

NOTE: ER is also a derivational ending signifying one who does something such as reporter (one who reports), dancer (one who dances), boxer (one who boxes). This aspect of ER was detailed in The Vowel Sequence.

II. Elements that Regulate the Addition of Endings

Many root words accept endings beginning with vowels (ES, ER, EST, ED, ING) without incurring a change in their root form.

Rule 1: Words that end in double consonants incur no change upon the addition of an ending.

walk:	walker		walked	walking
bald:	balder	baldest	balded	balding
jest:	jester		jested	jesting

Rule 2: Words ending in single consonants, consonant blends, or consonant digraphs preceded by a double vowel incur no change upon the addition of an ending.

boil:	boiler	boiled	boiling
raid:	raider	raided	raiding
dream:	dreamer	dreamed	dreaming
boast:	boaster	boasted	boasting
preach:	preacher	preached	preaching
paint:	painter	painted	painting

Rule 3: Words ending in OW incur no change upon the addition of an ending.

row:	rower	rowed	rowing
snow:		snowed	snowing

NOTE: Many of these OW words have irregular simple past forms – –

grow – grew, blow – blew

In the process of accepting endings beginning with vowels, many root words incur a change in form.

Rule 4: The addition of an ending beginning with a vowel to a root word ending in e required the deletion of the e.

smoke:	smoker	smoked	smoking
joke:	joker	joked	joking
mate:		mated	mating
wipe:	wiper	wiped	wiping
dine:	diner	dined	dining
strike:	striker	striked	striking

NOTE: An exception to this rule which should be taught at a more advanced stage in the sequence deals with the final e following g and c. The effect of e on c and g is to make the soft sound of these letters – – /s/ for C, /j/ for G. If an ending beginning with an A or O is added to CE and GE words, the E must be retained in order to keep the /s/ and /j/ sounds of the letters C and G respectively. If the final E were deleted, the sounds would become hard /k/ and /g/.

trace – traceable   courage – courageous

But notice if ING is added to trace, the E is omitted because C has a /s/ sound before I as well as E.

Rule 5: The addition of an ending beginning with a vowel to a root word ending in a single consonant preceded by a short vowel (nap) requires the doubling of the consonant.

nap:	napped	napping
rip:	ripped	ripping
slam:	slammed	slamming
scrub:	scrubbed	scrubbing
rot:	rotted	rotting

NOTE: Rule 5 applied to multisyllabic as well as monosyllabic words, if the accent of the disyllabic word is on the second syllable.

in-cuŕ: incuŕred, incuŕring
prefér: preférred, preférring
trans-mít: transmítted, transmítting

but

siǵ-nal: siǵnaled, siǵnaling (preferred spelling)
beń-e-fit: bénefited, bénefiting (preferred spelling)

Note should be made of the fact that the vowel sound in incur and prefer is not the short sound. There is irregularity to this condition in multisyllabic words, but not to the condition of a single final consonant which holds fast for both multisyllabic and monosyllabic words (See Rule 5).

Rule 6: If a root word ending in Y is preceded by a consonant (cry), the Y is changed to I before all endings beginning with a vowel.

cry:	cries	cried
try:	tries	tried
defy:	defies	defied

Exception: Rule 6 does not apply before the ending ING. To avoid the occurrence of two I's placed side-by-side, the Y of the root word is retained.

cry:	crying	spy:	spying
supply:	supplying	defy:	defying

Exception: Rule 6 also does not apply if the final Y is preceded by a vowel. To avoid the occurrence of two I's in sequence, the Y is retained.

buy – buying

Exception: Rule 6 also does not apply when the ending begins with a consonant. To avoid a long sequence of consonants, the Y is changed to I.

happy:	happiness	merry:	merrily

III. Derived Forms

Derived forms are words that are combined with either suffixes, prefixes, or both. It is hard to say which derived form the learner encounters first. The most effective instructional method may be to teach each component as the occasion arises. After a number of derivational forms have been mastered, structure can be provided by grouping according to prefixes, root words and suffixes, and then, sub-grouping according to meaning or function.

This instructional approach is predicated on the child's comprehension of the function each component performs within the word. Deductively or inductively, the learner must achieve an understanding of three basic concepts before structural analysis can become an effective tool:

. . . . The root is the main part of the word, and carries most of its meaning.

. . . . The prefix is the form that is placed before the root to change the meaning of the root.

happy: unhappy
comfort: discomfort

. . . . The suffix is the form that is placed after the root to change the function of the root.

happy (adjective)	happiness (noun)
hearty (adjective)	heartily (adverb)

A. Possible root, prefix, suffix combinations

1. The root: interest
2. Prefix + root: dis-interest
3. root + suffix: interest-ing
4. root + suffix + suffix: interest-ing-ly
5. Prefix + root + suffix: dis-interest-ed
6. Prefix + root + suffix + suffix: dis-interest-ed-ness

Two lists of prefixes and suffixes (one from Old English, the other from Latin) are to be found in the *Word Attack Manual* by Josephine Rudd.* Together these lists comprise the prefixes and suffixes that are most frequently combined with root words to form much of our multisyllabic vocabulary. Each affix (prefix or suffix) usually has more than one meaning; the meanings and explanations assigned in the Rudd lists are the most common ones.

B. Some Anglo Saxon Affixes

1. Prefixes
    - a-
    - for-
    - fore-
    - in-
    - mis-
    - out-
    - un-
    - under-
2. Suffixes

    To form nouns:
    - -er
    - -ness
    - -hood

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*Rudd, Josephine. Word Attack Manual. Cambridge, Mass., Educators Publishing Service, 1961.

To form adjectives:

- -less
- -ly
- -some
- -y

To form adverbs:

- -ly

C. Some Latin Affixes

1. Prefixes
    - a, ab
    - ad, (ac, af, ag, al, an, ap, ar, as, at)
    - ante
    - bene
    - bi
    - con (cor, com, col, co)
    - contra (counter)
    - de
    - dis (dif, di)
    - e, ex (ef)
    - in (im, ir, il)
    - mal
    - ob (oc, of, op)
    - per
    - post
    - pre
    - pro
    - re
    - sub (suc, suf, sug, sup, sus)
    - super (sur)

2. Suffixes

To form nouns

- -ar
- -or
- -an, -ian
- -ant, -ent
- -ance, -ence
- -ancy, -ency
- -ty, -ity
- -ment
- -(t)ion, -(s)ion
- -ary, -ory

To form adjectives

- -able, -ible
- -al
- -ic
- -ive
- -ous

To form verbs

- -ate
- -fy
- -ize (Greek)

D. The Hyphen

In most instances the prefix is joined directly to the word stem (root), but there are conditions which require the use of a hyphen between prefix and stem.

1. The prefix self almost always requires a hyphen itself and the stem.
   self-control, self-confidence, self-assured
2. When the prefix ex means former, a hyphen is required.
   ex-president, ex-husband, ex-mailman
3. When the prefix ends with the same letter as the first letter of the stem, a hyphen is required.
   semi-independent, re-elect
4. To avoid confusion between visually identical words with different meanings, a hyphen is required.
   re-cover — — — to cover again
   recover — — — to regain
   pre-position — — — to place in position before
   preposition — — — — a linguistic form that combines
   with other words to form a phrase
5. When a prefix precedes a proper noun, a hyphen is required.
   anti-United States, pre-Louis XIV

IV. Compound Words — — Two Forms

1. Without a hyphen

A compound word consists of two words joined together without modification of form. The meaning of the compound word may retain the meaningful elements of the component words, or a new meaning may evolve from the union (broadcast).

airplane, bedside, bedtime, campfire, cowboy, fireman, hilltop, lookout, milkshake, newsboy, toothbrush, watchman, workbook, yardstick

NOTE: Not all words used together with frequency to name an object have been compounded.

bedroom	but dining room
courthouse	but post office

Since such instability of compounding exists, care must be taken to select appropriate words for instruction, and the learner should become aware of the inconsistencies.

2. With a hyphen

a. When two words function as modifiers of a word they precede, a hyphen is used between the two modifying words.

a red-hot poker, a wide-lens camera, a bomb-proof shelter

b. When two or more words function as a subject complement or a verb with a single meaning, the words are hyphenated.

He's a six-footer. She was caught red-handed.

The congressman steam-rolled the bill through committee.

c. The compounding of nouns seems to be even more inconsistent than other word forms, and the dictionary is most useful in establishing the presence or absence of the hyphen.

V. Syllabication

Syllabication is the process of dividing multisyllabic words into pronounceable units — — syllables. The process is regulated by somewhat consistent rules, the application of which facilitates the learner's acquisition of all language art skills.

Readiness for syllabication starts at the earliest level with training in listening for the number of "beats" and the stressed "beat" in words. It is not necessary for the learner to divide into syllables every word he encounters. This procedure would inhibit rather than facilitate comprehension and flow of reading. But sufficient practice must be provided for the child to learn the syllabication principles and how to apply them to the higher level vocabulary of the upper grades. Without the skill of syllabication, the learner remains forever a learner — a dependent reader.

A. Definitions

1. Syllable

A word with one sounded vowel is a syllable.

up(1) and(1) come(1) to(1) the(1)

Each part of a large word having one vowel sound is a syllable.

up-on(2) in-to(2) com-ing(2) moun-tain(2) com-pa-ny(3) man-u-fac-ture(4)

The example, man-u-fac-ture, shows that a syllable can be one letter if that letter is a sounded vowel.

The number of syllables in a word is established by the number of sounded vowels and not by the number of seen vowels. Some vowels are silent.

come — — — one syllable; the E is silent

look — — — one syllable; the two O's form one sound

boating — — two syllables; the I in ing is sounded as well as the O in boat.

2. Kinds of syllables

a. Closed syllable

A syllable that ends with a consonant is a closed syllable. It usually has a short vowel sound.

nap — — — one closed syllable with short /ă/

mend-ed — two closed syllables with short /ĕ/

mapped — — one closed syllable with short /ă/; the e of ed is not sounded

NOTE: The outstanding exceptions to the principle of closed syllables having short vowel sounds come from words ending in final E, words containing vowel combinations or diphthongs. Final E and vowel combinations regulate the phonetic value of vowels as long sounds, and the diphthongs are not short vowel sounding.

Make + ing becomes mak/ing

The first syllable MAK ends with a consonant, but its vowel has a long sound because of the final E that was dropped in the process of attaching the ING ending.

Boat + ing becomes boat/ing

Although the first syllable boat ends with a consonant, the vowel is still sounded long because of the two-vowel rule.

Augment is another example. The first syllable, AUG, ends in a consonant, but the vowel is not sounded short because au is a diphthong with its own unique sound which is neither short nor long.

Notwithstanding the numerous exceptions, the closed syllable principle is still worth learning because there is a large vocabulary to which it is applicable. If the learner knows that the rules of final E, vowel combinations, and diphthongs have priority over the closed syllable principle, there should be no problems for the student.

b. Open syllable

A syllable that ends with a vowel is an open syllable. It usually has a long vowel sound.

go: one open syllable with long /ō/

try: one open syllable with long /ē/

ve-to: two open syllables with long /ē/ and long /ō/ respectively

to-ma-to: three open syllables with long /ō/, long /ā/ and long /ō/ respectively

NOTE: Many words are combinations of both kinds of syllables

pen-ny: one closed and one open syllable

kid-ney: one closed and one open syllable

mo-tel: one open and one closed syllable

Also, the exceptions to the open syllable principle having a long vowel sound come from the diphthongs and R affected vowels that have their own sounds which are neither short nor long.

orate: ȯ-rate

author: o-thŏr

The value of teaching such inconsistent principles has been expressed in the note appended to the section on closed syllables.

3. Syllabication Patterns

   a. Vowel-consonant-consonant-vowel — — — VCCV

   When the middle section of a word follows the VCCV pattern the word is divided between the two consonants — — — VC/CV

   kidnap — — kid/nap
   dimly — — dim/ly
   sloppy — — slop/py
   frantic — — fran/tic

   b. Vowel-consonant-vowel — — VCV

   When the middle section of a word follows the VCV pattern, there are two ways to divide the word:

   1. V̄/CV — — The word is divided after the first vowel; the syllable is open and the vowel sound is long.

      motel — — mō/tel
      fiber — — fī/ber
      spider — — spī/der
      demon — — dē/mon

   2. VC/V — — The word is divided after the consonant; the syllable is closed and the vowel sound is short.

      novel — — nŏv/el
      pedal — — pĕd/al
      comet — — cŏm/et
      ravel — — răv/el
      panic — — păn/ic
      closet — — clŏs/et

NOTE: The syllabication pattern V̄/CV is tried first. If the word sounded by this pattern does not evoke a sense of familiarity in the student, pattern VC/V should be tried. If the word is in a sentence, the meaning of the word sometimes offers a good clue.

nŏ/vel or nŏv/el
mō/tel or mōt/el
pă/nic or păn/ic
spī/der or spīd/er

   c. Vowel-vowel — — VV

   When a word has a vowel-vowel pattern that does not function as a vowel combination it is sometimes necessary to divide between the vowels — — V̄/V. The first vowel usually has a long sound.

   diet — — dī/et
   museum — — mu/sē/um
   oasis — — o/ā/sis
   riot — — rī/ot
   poem — — pō/em
   create — — crē/ate

4. The compound word pattern

   Syllabication is between the components of the compound word.

   sunburn — — sun/burn
   yearbook — — year/book
   township — — town/ship
   milkman — — milk/man

5. Prefix-root-suffix pattern

   Syllabication is after each of the word parts.

   unkindness — — un/kind/ness
   reporter — — — re/port/er
   informing — — — in/form/ing

6. The le pattern

   When a word ends with a consonant followed by le, the consonant joins with the le to form a syllable:

   stable — — stā/ble
   staple — — stā/ple
   bubble — — bŭb/ble
   gamble — — găm/ble
   cradle — — crā/dle

NOTE: Although the final e is silent, there is a weak vowel sound that is pronounced between the two consonants (bal, pal). This vowel sound is known as the schwa and is present in all such consonant le syllables. Listen for it in the following examples:

jig/gle, min/gle, tri/fle, ca/ble, cir/cle

7. Special Considerations

   a. Consonant digraphs — — — consonant combinations that form special speech sounds — — /SH/ /CH/ /TH/ /PH/ /WH/

      Although the rules of syllabication apply to words containing consonant digraphs, the digraph must be treated as one consonant; the division can never occur between the consonants forming the digraph.

      poncho — — a VC/CV pattern pŏn/chō
      ether — — a V/CV pattern ē/ther
      fishing — — a VC/V pattern fĭ/shing

   b. The ck combination

      CK signals one sound, /k/

      The letters, therefore, are not divided into separate syllables; they remain together.

      nickel — — nick/el
      picket — — pick/et
      pickle — — pick/le
      speckle — — speck/le

   c. Consonant blends — — BR, BL, GR, GL, etc.

      1. In many words where there are clusters of three or more consonants, the place of syllabication should be based on dividing the prefix from the root instead of keeping the consonant blend intact.

         sub/tract — — Sub is the prefix; tract is the root.
         in/flate — — In is the prefix; flate is the root.
         in/cline — — In is the prefix; cline is the root.
         sub/scribe — — Sub is the prefix; scribe is the root.

      2. In other instances where there are no prefixes and roots to provide syllabication cues, the focus of attention becomes the consonant blend which is usually kept intact.

         zē/bra, lŏb/ster, mŏn/ster

         Too much concern is often wasted on this point. If syllabication is used to provide the child with pronounceable word parts, as long as the word is articulated appropriately does it matter at what point the division takes place? The concern is not pointless when syllabication is used as a written language tool to determine where to terminate a word at the margin. Then, if there is uncertainty, the dictionary should be used.

8. The Special Sounds of Final Syllables

a. The suffixes TION and SION signal the sound of /shun/.

commission, permission, condition, fruition

b. The letter T before other suffixes beginning with I also signals the sound of /sh/ as in

-ial — — partial, martial, confidential, initial
-ient — — patience, patient, quotient
and
-ience
-ious — — cautious, ambitious, fictitious

c. The letter C before certain suffixes beginning with the letter I signals the sound of /sh/ as in

-ial — — special, crucial, artificial, racial
-ian — — musician, optician, electrician, theoretician
-ient — — ancient, efficient, sufficient, deficient
-ious — — spacious, audacious, tenacious, gracious

d. The letter I in certain suffixes has the consonant sound of Y (yellow), if it is preceded by the letters N or L. This sound shift in the letter I does not occur with any other consonants.

-ial — — congenial, genial
-ian — — Italian, valiant, brilliant
and
-iant
-iar — — familiar, peculiar
-ience — — convenient, convenience, lenient, leniency
and
-ient
-ion — — scallion, stallion, million, onion, bunion
-ior — — senior, junior
-ius — — genius

Notice the N or L that always precedes the Y sounding I. Any other consonant before the I suffixes listed above signal the I to be sounded as a long /ē/.

variant – v́er-ē-ənt   gradient – grād-e-ənt   radiance – ŕād-é-ən(t)s

e. Silent final E suffixes

The silent final E suffixes do not signal the long vowel sound of the first vowel. It has been noted that distinct vowel sounds are heard only in stressed syllables. Rarely are these final E suffixes stressed. Therefore, they frequently have a schwa vowel sound.

-ile — — ə/ 'fertile, 'fragile

Exception: decile — — 'des-īl   There is a secondary accent on the suffix.

-ine — — ən 'engine, 'genuine, 'medicine, 'discipline
-ite – ət 'definite, 'opposite, 'favorite
-ate – at 'climate, 'senate, 'private

There are two final E suffixes that signal a short /ĭ/ sound

-age (ĭj) — — 'image, 'cottage, 'courage

-ege (ĭj) — — 'college, 'privilege

One final e suffix which receives the stress of the word has a long vowel sound, but not the one it should have.

-ine (ēn) — — ma-'chine   ma-'rine   rou-'tine   sar-'dine

VI. Accentuation

In the spoken language, there is a practice of accenting (stressing) words and syllables that adds meaning to our utterances. As the child learns to listen critically, he becomes aware of patterns of accentuation. The effect of his awareness is to broaden the scope of his understanding, and to increase the fluency of his reading performance.

This section of the sequence details a few of the patterns and principles of accenting in which the child should receive instruction.

A. Principles of Accenting

1. To accent is to place additional spoken stress on a part, or parts, of a word.
2. If a word has a large number of syllables, there is a primary stress (heavy) on one syllable and a secondary stress (less heavy) on another syllable.
3. Dictionaries use various marks to indicate points of primary and secondary stress. *Webster's Seventh New College Dictionary* has a small vertical line before and slightly above the syllable of primary stress and the same kind of line before and slightly below the syllable of secondary stress.

en-ˌthu-si-'as-tic   'en-ve-ˌlope   ˌman-u-'fac-ture

NOTE: Secondary stress can precede primary stress as in enthusiastic and manufacture.

4. The vowel sound in an accented syllable is usually distinct.
5. The vowel sound in an unaccented syllable is the indefinite sound called schwa (ə).

client — — 'klī-ant   falcon — 'făl-kən   margin — — 'măr-jən

B. Patterns of Accenting

1. Two-syllable word patterns
   a. Frequently the accent is on the first syllable when the word form consists of 'VC/CV.

      'rab-bit, 'kid-nap, 'mat-ter, 'but-ton, 'cur-tain, 'sil-ver

   b. Words that consist of a prefix and a stem have stress on the stem.

      re-'fuse, im-'pair, a-'loud

   c. Generally, if the VCV word form is divided after the vowel (V/CV) and the vowel sound is distinctly long, the accent is on the first syllable.

      'vē-to, 'sō-da, 'mū-sic, 'spī-der, 'hū-mid, 'bā-by, 'pī-lot, 'sī-lent

   d. Generally, if the VCV word form is divided after the consonant VC/V and the vowel sound is distinctly short, the accent is on the first syllable.

      'rŏb-in, 'tŏn-ic, 'trăv-el, 'prŏf-it, 'tăl-ent, 'căm-el, 'făc-et, 'rĕb-el

   e. Generally, if a word ends with a consonant le syllable, the accent is on the first syllable.

      'wig-gle, 'cack-le, 'hag-gle, 'jan-gle

2. Three-or more-syllable word patterns.

a. Sometimes the accenting of a two-syllable word remains the same when the number of syllables is increased to three syllables.

'pi-lot — — — 'pi-lot-ed — — — 'pi-lot-age
'mu-sic — — — 'mu-si-cal
re-'fuse — — re-'fus-al — — — re-'fus-er
'prof-it — — 'prof-it-able
'trav-el — — 'trav-el-ing
'tal-ent — — 'tal-ent-ed
'meth-od — — 'meth-od-ist — — 'meth-od-ism

b. Sometimes there is a shift in the accent of a two-syllable word when the word's syllables are increased.

'mu-sic — — mu'si-cian
'meth-od — — me-'thod-ic
'auc-tion — — auc-tion-'eer

c. Sometimes the syllable of primary accent becomes the syllable of secondary accent.

'auc-tion — — auc-tion-'eer
'bru-tal — — ,bru-tal-i-'za-tion

d. There seems to be left-to-right accent shift as suffixes are attached to a word.

'bru-tal — — 'bru-tal-ize — — bru-'tal-i-ty — — ,bru-tal-i-'za-tion
fa-'mil-iar — — fa-'mil-iar-,ize, fa,mil-'iar-i-ty, fa,mil-iar-i-'za-tion
but

The accent can remain fixed on one syllable in a whole family of words.

fa-'nat-ic, fa-'nat-i-cal, fa-'nat-i-cal-ly, fa-'nat-i-,cize, fa-'nat-i-cism

e. The accent is on the syllable immediately preceding these suffixes: ion, ity, ic, ical, ian, ial, ious.

,am-mu'ni-tion	con-'di-tion
'com-i-cal	so'ci-ety
com-'mu-ni-ty	'gra-cious
mu-'si-cian	,con-fi-'den-tial

UNIT II CHAPTER 8

SEQUENCE OF COMPREHENSION SKILLS

As the child translates symbol into sound, the next or simultaneous step he must take involves the movement into meaning – from grapheme (written letter) to phoneme (letter sound) to morpheme. A morpheme is the smallest meaning bearing unit in a word. For instance, in the word "returning" there are three morphemes: $\overset{1}{\text{re}}\ \overset{2}{\text{turn}}\ \overset{3}{\text{ing}}$, each of which could be analyzed for meaning. In this example it is interesting to note that each syllable is a morpheme, but this is not always the case. It is this step – understanding the meaning bearing units of a word – that is considered one of the comprehension skills of the beginning reader.

Before we explore some of the ramifications of comprehension skills used in reading, we might think of the origins of the comprehension of speech sounds. How in fact is it possible that the baby integrates the speech of those around him with the meaning implicit in that speech? We may assume that the child hears before he understands. The task of sorting sounds into their respective meaning is a skill shared with the lower animals. In this way, in terms of the meaning of sounds they make, added to kinetic clues of body movement, all the lower animals are clear concerning the communication to mate, to fight, to follow and to find food, all of which is shaped by the members of their species. One of the commonly agreed upon points of difference between man as he has evolved and the lower animals concerns speech. Speech is formed by a complex and intricate alignment of tongue and lips and the sensitive control of the air stream. The communication of abstractions through the delicate mechanism of speech is possible only to man.

Choosing from among a multiplicity of minutely varied speech sounds will change the meaning of a word. One small change can make a concrete word an abstraction. The function of the written and spoken word is to communicate meanings which are encoded, decoded, transmitted and received. Shades of meanings may be communicated not only by means of kinetic cues but by tiny variations in words, by differences in syntax and through context.

Thus meaning and the communication of meaning is at the heart of the production of speech. The understanding of meaning within the confines of the abstract symbol system we call language is the comprehension skill.

The section of the Taxonomy pertinent to the skills of comprehension is Basic Skill 3 (Comprehension), Subskills 1 through 7 (1. Main Ideas, 2. Details, 3. Sequence-Relationships, 4. Word Meaning, 5. Context Inference, 6. Critical Analysis, 7. Recreational Reading). All of the suggestions for developing comprehension skills can be specified in the taxonomic number code and language systems of this Basic Skill and its Subskills. The first code number of the three digit taxonomic number code system for the "what" of instruction in Comprehension must be 3 because Comprehension is Basic Skill 3. The second digit is drawn from the Subskill code numbers of 1 through 7 with the selection of code number dependent on the skill that is to be developed. The third digit with a possible code number range of 1 through 4 signifies the Sequential Level or grade level at which the skill is generally taught. The three digit code number as applied to instructional items in comprehension would be 3, any possible digit 1 through 7, any possible digit 1 through 4.

THE WHAT OF INSTRUCTION

Basic Skill	Subskills	Sequential Levels
3. Comprehension	1. Main Ideas	1. Grade 2 and Below
	2. Details	2. Grades 2-4
	3. Sequence-Relationships	3. Grades 4-6
	4. Word Meaning	4. Grades 6 and Above
	5. Context Inference	5. Ungradable – not applicable to the Comprehension Sequence
	6. Critical Analysis	6. Multilevel – not applicable to the Comprehension Sequence
	7. Recreational Reading	

The child's comprehension at the point primary reading typically begins (approximately six years of age) is predicated on many variables. What is commonly called experiential background is the developmental level of concept formation. Concept development in the young child is not necessarily a function of the quantity of exposure to potential learning experiences (e.g., exposure to the park, the zoo, the movies, to music and books), but the quality of that child's exposure and the degree of involvement he feels with those activities in which he is an onlooker or participant. Let us list just a few of the criteria for involvement that are essential to the growth of concept formation and that consequently lead to the development of language comprehension.

1. The variety of questions that are addressed to the child in the course of exposure to a potentially rewarding learning situation.
2. The encouragement the child is given to perceive the specific elements or details of a situation, and the interaction of people in those situations.
3. The encouragement the child is given to categorize and schematize objects and events under a general concept or rubric.
4. The opportunity for expression of emotion, feeling, and affective response to the world and life situations in which he participates.
5. The encouragement the child receives to ask many questions, a variety of questions, and the direction he receives in finding the answers. This includes both immediate answers to questions he asks supplied by adults and delayed answers that involve a more extensive search into other sources at a higher level. Also involved here is the necessity for adults to answer questions in a style of completeness appropriate to the child's developmental level with the indication that there is more to be known about the area under questioning.
6. The early exposure to the existence of a symbol system which is the written expression of the spoken word. This is not to imply that formal training in reading is necessarily to be begun at a preschool level but that the child should be made aware of the interaction of people with written material.
7. The opportunity the child has to communicate at length with people in dissimilar life situations in order to initiate the growth of the child's awareness of the world beyond his narrow scope.

So far we have been concerned with the developing child before he enters the formal school situation and the primary stage of reading. Preschool activities concentrate on a variety of experiences expressed through basic levels of language. Thus the kindergarten and first grade teacher teaches colors, textures, animals, home and family life experiences, occupations and simple geometric concepts in relation to the written and spoken symbols that represent them. The use of "Experience Charts" to write a sequence of simple sentences about activities is one translation of life experiences into written and read communication. The stress in early childhood education often revolves around creating opportunities for children to participate in the seven categories of communication listed above. Often exposure to these opportunities is remedial, especially in the neighborhoods in which the school population is considered disadvantaged in terms of language development.

With first grade begins the formal instruction in reading and simultaneously the continuation of activities in oral communication. A variety of conflicting problems confronts the primary teacher of reading who has a disadvantaged classroom population. His class may consist of children with varying degrees of emotional instability that seriously affect the child's involvement in the new tasks at hand. (As you know, this manual is concerned with the emotionally disturbed, socially maladjusted child who finds it difficult to receive instruction in the normal classroom. Very often while such a child is identified in a normal classroom, for a variety of reasons he cannot be removed for special instruction.)

Those children who are emotionally disturbed may have a highly developed level of concept formation and thus a sophisticated comprehension level but a blockage at the abstract, symbolic representation level. In an eighth grade class of emotionally disturbed boys, for example, the staff member who worked with the teacher found through diagnostic tests that the children had highly sophisticated comprehension skills, but poorly developed decoding word skills. Thus these children were able to conceptualize easily the ideas in a story when it was read to them but were unable to actually read the story — the representation of ideas in a sequence of words. The task (covered in more detail later in this section) that confronted the team of teacher and staff member was to express complex ideas in simple form, to couch in a scaled down written form the elaborate content for which the child's comprehension was excellent when presented aurally.

We return once more to the typical first grade classroom. Such a class population might also contain children with a range of different life experiences. For these children, along with exposure to basic reading skills, a remedial program of concept development must be insured. With such a program, the child not only learns to recognize words and to place them in larger units such as sentences, but he becomes aware of the multiple meanings of words that enable him to make inferences about longer passages.

Comprehension for this child requires more than teaching what a group of words such as "the dog's soft fur" means. It requires that the child be exposed to a variety of examples of "softness" and a variety of other textures, many types of dogs (either vicariously through pictures, or first hand in a dog pound), and the difference of dog in relation to other animals. This is in direct contrast to the child who has experienced many types of animals, acquired knowledge of their behavior and habits, and has been stimulated by textural qualities of dogs. For such a child, given a fair degree of emotional stability, the concepts implicit in the phrase "the dog's soft fur" may be far below his stage of development. Through a variety of approaches to reading, he will go beyond these words quickly, and be ready for higher levels of decoding and comprehension of concepts to which he has not previously been exposed.

Comprehension for the beginning reader thus involves the understanding of what has been decoded through the filter of life experiences. Conflicts in the teaching/learning act may occur when decoding or comprehension abilities are not developing concurrently. The teacher may thus be confronted with the dual task of remediating deficient comprehension and of helping the child to develop on-going decoding abilities through phonic audio-lingual and other reading methods.

As the child progresses from primary to intermediate reading instruction, decoding and comprehension tasks increase in complexity. From the point at which the child is reading more than one word at a time in the basal primers or simple storybooks, he is questioned for main ideas and details. Ability to reproduce sequence relationships can also be a part of even the simplest stages of reading. Real context inference and critical analysis begin as a meaningful task only in the intermediate reading stages. The style of teacher questioning and the types of required tasks in comprehension help to change the focus from the simple comprehension tasks of noting main ideas and details of a selection, to the more complex tasks of critical analysis and context inference.

Perceptive teacher questioning and a diagnostic orientation to task assignment are prerequisite to developing comprehension skills in children. We might examine now, some types of questions useful at the intermediate and advanced levels for the development of comprehension.

CONTEXT INFERENCE

1. Why did X character behave as he did?
2. How did Y and Z characters feel about the behavior of X?
3. What would have happened if X had changed his behavior in the following ways? Illustrate with situations.
4. What would X have done in the following situation?
5. Is the author telling us that X's behavior was good or bad? What is the author's feeling about X's behavior?
6. Do you agree or disagree with the author's assessment of X's behavior?

SOME AIMS OF CRITICAL ANALYSIS

1. To distinguish between fact and opinion
2. To identify the varieties and sources of bias
3. To articulate the areas of agreement and disagreement to the author's implied opinion
4. To become increasingly perceptive in evaluating the relative worth of different types of written material from the personal point of view
5. To identify the various types of prose writing on a gross level, e.g., satirical, humorous, tragic or sad, folktale or fantasy
6. To perceive the difference between informal and formal styles of writing, to make gross identification of dialect and substandard writing and the possible reasons for author's choice of style

Comprehension might include the following general types of activities which cut across grade levels and can be scaled up or down depending upon the competence and readiness of the children.

1. Choose synonyms, antonyms and homonyms for words by using a matching, crossword puzzle or card-game format.
2. Rearrange sentences from a disarranged story into proper sequence relationship.
3. Have children do exercises in following directions.
4. Cut a story into paragraphs with the last line left out; the child is to supply that last line.
5. Choose a vital character from a well-liked story, and have the child write an original story consonant with that character.
6. Show how context can change the meaning of a word by using a word in several ways. Write sentences illustrating the multiple meaning of the following words: prize, stripe, catch.
7. Categorize objects or ideas under a broad conceptual schema.

EXAMPLES FOR #7

A. Which of these things belong in a house?

table barn car food bed sidewalk

B. Which of these things are means of transportation?

car house horse rabbit bus train mouse

C. Circle the things you eat

candy table chalk meat paper fruit

D. Circle the things you wear

pencil shoes books sweater hat perfume

E. Which of the following are occupations?

mailman swimming pool bus driver singer clean policeman friend dog catcher

F. Which of the following are feelings?

sadness fright friend friendship eat hunger sit tired hope challenge

G. Match the words that go together

pen
chair
ring
ice cream
shoes
pear

apple
bracelet
cake
pencil
sofa
shirt

H. What makes the two situations similar?

1. The boy broke his arm.
   The woman lost her favorite bracelet.
2. The dog had a bath.
   The boy went for a swim.
3. John ate four dishes of chocolate ice cream.
   Bill had a cut on his stomach.
4. The parrot talked about the weather.
   John saw his pet fly away.
5. Bill told John not to be late.
   Sarah got up at 7:30 a.m.
6. Susan lives on a farm.
   Joe lives in the city.

I. What makes the two situations different?

1. The trees are green.
   The grass is green.
2. Trees are green.
   My dress is green.

3. I can cry.
   My doll can cry.
4. The ocean is big.
   The lake is big.

8. Actually a subtopic of #5: solving simple and more difficult analogies.

   shoe : foot : : glove : ?
   rug : floor : : picture : ?
   candy : mouth : : lightbulb : ?
   chocolate : jellybean : : vanilla ice cream : ?

9. Learning to choose simple and appropriate similes and metaphors to increase language effectiveness.
10. Using role playing and charades to simulate subtly expressed feelings of another person to be analyzed and interpreted by the audience.
11. Using a game format (I am thinking of something that has . . . . . .) have children build up a series of concrete characteristics to which the audience must then assign a general name.

    e.g., I am thinking of something that has four legs, is something made of cloth and wood, is used by one person at a time, is not alive. . . etc.

12. Using a game format, encourage children's use of imagination to perceive themselves in unusual situations posed by the question, "What would you do if . . . . ?"
13. Create pseudo-languages with children in which they are forced to discriminate the part of a word that bears meaning from a group of meaningless sounds.

EXAMPLES

A. "OP language": in which OP is placed before every vowel combination (except silent vowels)

   "Whopat dopid yopu sopay" (What did you say?)
   "Yopu lopok lopike yopu opare slopeepopy." (You look like you are sleepy.)

B. Pig Latin

14. Instruction in suffixes, prefixes and root words should be followed by extensive practice in the structural analysis of difficult, multisyllabic and unknown words. In developing this skill, the child should come to view the dictionary as an important tool.

EXAMPLES

prefabricated
depressingly
unchallengeable
undecipherable
fragmentedly

Any and all of these activities might be scaled up or down to make them appropriate for a given grade level and for the emotional/behavioral level of the child. As we have previously described, a common problem at P.S. 9 was a sophisticated comprehension coupled with an inadequate decoding ability. The question was how to help an eighth grader with a medial second grade decoding ability and an eighth grade comprehension ability.

UNIT II CHAPTER 9

SEQUENCE OF STUDY SKILLS

In beginning reading the child deals mostly with narrative material. As the child progresses to successive grades, more subject matter is introduced. The shift from narrative to subject matter material necessitates that the child acquire specialized vocabularies, concepts and study skills in all content areas.

The child must learn to define and supplement specific skills in order to become progressively more competent in adjusting to the peculiar purposes and materials of the content areas.

Apparently there is no general undifferentiated silent reading ability; reading competency in a particular content area is predicated on comprehension coupled with selective use of study skills. Many of the basic skills and abilities of the mature reader cannot be developed in narrative material. The teacher may need to go directly to a content area in which the study skill is most consistently used to individualize and personalize this skill for the child. This may have two positive effects: it motivates the child by giving him direct and interesting application of the skill (e.g., having the child make a map of a trip he has taken and then applying it to the social studies unit the class may be currently studying), rather than monotonous and irrelevant practice of the skill; it facilitates the transfer of the skill from an area in which the child can see immediate relevance to a more abstract and complex use of the same skill (e.g., using the map to measure and estimate distance can progress to a more complex integration of math and social studies skills. The next step may be that the child, enabled to visualize graphic and spatial relationships, is consequently capable of evaluating and organizing any data he may receive in areas other than social studies.

The difference between comprehension abilities involved in sensing the organization of information and the basic study skills of organization are viewed in the following way: comprehension abilities involve more complex reasoning and restructuring of information while the study skills refer to the *mechanics* of ordering the information for further study. Although basic comprehension of any material read by the child actually must precede the study skills of organizing, paraphrasing and systematically evaluating bias and relevancy of material, these study-skill mechanics form the basis of even more effective understanding of ideas involved. Thus, finding the most efficient tools to facilitate comprehension might well be the aim of developing study skills.

The curricular materials of every field impose their own specific and unique demands in terms of acquiring study skills. Certain features of specific content areas reflect these unique demands.

1. There is a heavy load of facts and concepts.
2. Variations in typographical arrangement may be confusing.
3. Materials may be uninteresting. The skills involved in their use may tend to be dry manipulation and practice.
4. Readability is harder. Material may tend to be intrinsically impersonal, i.e., unrelated to the child's own experience.
5. The writer may assume greater background than the child has, making it difficult for him to use the skill.

Certain study skills that constitute the basis for facilitating reading comprehension overlap the various content areas. A sequence of these content overlapping study skills has been provided for the teacher from the structure of Basic Skill 4 (Study Skills), Subskills (1. Skimming, 2. Dictionary, 3. References and Texts, 4. Maps, Graphs and Tables, 5. Speed and Accuracy, 6. Other Sources and Processes). The three digit taxonomic code number designating the "what" of instruction for each item in the sequence begins with the digit 4. The second digit is drawn from the Subskill code numbers of 1 through 6 with the selection of code number dependent on the skill being developed. The third digit with a possible code number-range of 1 through 4 is drawn from the Sequential Levels and signifies the grade level at which the sikll is generally taught. The three digit code number as applied to instructional items in The Study Skills Sequence would be:

3   any possible digit – 1 through 6   any possible digit – 1 through 4

THE WHAT OF INSTRUCTION

Basic Skill	Subskills	Sequential Levels
4. Study Skills	1. Skimming	1. Grades 2 and Below
	2. Dictionary	2. Grades 2-4
	3. References and Texts	3. Grades 4-6
	4. Maps, Graphs and Tables	4. Grades 6 and Above
	5. Speed and Accuracy	5. Ungradable – not applicable to this sequence
	6. Other Sources and Processes	6. Multilevel – not applicable to this sequence

1. SKIMMING AND SURVEYING

Skimming is a kind of rapid reading, the simplest form of which is to locate a specific name, date or single word in lists or paragraphs. Comprehension of the entire selection is not involved here because the "reader" remains oblivious to everything but the task of locating specific information. A sample "lesson plan" for developing the technique of skimming follows:

Procedure

A. Write a specific question (on the board) and review the type of rapid reading which aids in locating answers to "who," "what," "where," and "when" questions.

B. 1. Have the student read the question carefully. State the "key" word that indicates the information required. Underline the key word.
   2. Through questioning, have the student identify other words in the question that act as guides to the information needed. Underline these words.

C. Direct the student to turn to a specific page in the text to find information indicated by the underlined words in the question.

D. Tell the student to stop and check his answers by reading very carefully to determine whether or not the correct answer to the specific question has been located.

Development

A. Write on the board:

Who was the first explorer to reach the new world?

Question: How would you locate the answer to this question quickly?

Answer: Skim the materials to locate the proper name answering the question, who.

Question: How would you locate answers to the questions that indicate where and when?

Answer: Skim the material to locate capital letters that may answer the "where" question and numbers answering the "when" question.

B. The word who in this question is a key word because it indicates that the name of a person is required to answer it.

Question: In order to answer the question, are there any other words in the question that point to the need for additional information?

Answer: The words first explorer, new world are also "key" words in the question.

C. Turn to page___. Skim the page quickly to find the name of the explorer. Remember that a name is the only detail for which you are looking.

D. Read the answer you have located to see if it answers the specific question.

The ability to skim content material in order to determine its relevancy to a specific problem is also part of this general skimming ability. Suggestions for a generalized procedure follow:

A. Write a social studies problem on the board for which pertinent content material is needed.

B. Have the student examine the problem to locate the words that pinpoint the information this problem requires. Underline these words on the board.

C. Direct the student to turn to the table of contents in their texts in order to locate the chapters listed under the unit to which the specific problem relates. Write the chapter headings and pages on the board.

D. Indicate another device used by authors to assist students in the use of a textbook, e.g., the summary at the end of the chapter.

E. Have the student turn to the summary of the first chapter and direct that it be read rapidly for a general impression of the content. Through questioning, elicit from the student whether or not the contents of this chapter will help answer the question.

F. Use the same procedures described in step E. to determine the relevance of other chapters to the problem.

Recognizing the author's devices in organizing long units of content:

A. Have the student quickly survey an entire unit in the text to locate the different kinds of headings in the selection.

B. Through questioning elicit from the student why the headings are located so quickly.

C. Have the student examine the unit heading and determine from the heading's position on the page, the style and type of print, and the importance of its content.

D. Follow the above procedures to establish the importance of section and paragraph headings.

E. Through questioning, have the student note the relationship that exists between:

1. Section and unit heading
2. Paragraph and section heading

II DICTIONARY SKILLS

How to find a word expeditiously, how to choose the desired meaning from those listed and how to use the dictionary as an index for the pronunciation and spelling of words are all implicit skills in the efficient use of the dictionary.

The teacher can use a sequence of dictionaries rather than a single dictionary for the effective development of simple-to-complex skills, or to teach missed skills. Thus the teacher may want to start with a picture dictionary – perhaps pupil-made – stressing simple one-sentence definitions and then move to a dictionary which includes syllabication, phonetic pronunciation, roots, synonyms and derivations.

Using dictionaries of varying difficulty and from a variety of publishers can be a way of reinforcing the necessary study skills in the classroom.

A teacher recognizes that the English language is not static; the "rightness" or "wrongness" of language is less absolute than many people believe. For example, there are regional differences in the pronunciations of many sounds; teachers must be very careful not to equate their own preferences with "correctness." Extensive use by educated people is the standard used for preferred pronunciation in a dictionary, but even this does not carry over to such details as the exact inflection given to a short vowel. Acceptance of difference does not imply a lessened emphasis on improvement in language, but rather the development of understanding that language can be rich and living and that people ultimately determine usage.

Points for the development of dictionary skills include the following:

A. Developing the efficient use of guide words in locating specific words in the dictionary

B. Understanding the need for pronunciation keys in dictionaries and how to use those keys

C. Using entry words

D. Cross-referencing of a word

E. Supporting skills include:

1. Alphabetizing words quickly and in serial order by their 2nd, 3rd and 4th letters
2. Using guide words to see how vowels and consonants are pronounced
3. Understanding accent marks and diacritical marks
4. Dividing words into syllables
5. Finding appropriate word meanings and spellings as an aid to writing
6. Determining abbreviations, finding synonyms, antonyms and homonyms
7. Forming plurals and using suffixes and prefixes

III REFERENCES AND TEXTS

Introducing students to those basic parts of textbooks that serve as study skill tools

Learning to use:

A. *Title page* as the official source for the book's complete title, the author's name and the name of the publisher

B. *Reverse of title page* for the most recent copyright date

C. *Table of contents* as an outline showing a book's subject matter, scope and arrangement of material

D. *Introductory note or preface* as sources of further information about the scope, purpose and features of the book

E. *Index* as a detailed, alphabetical listing of subjects with exact references to those pages that deal with the subjects. Attention to the index will bring out the need for checking the symbols used and the possibilities of arriving at a general or full treatment of subject by noting references to inclusive pages or references to consecutive pages.

F. *Other features* such as vocabularies, lists of maps or illustrations, footnotes, glossaries, appendices and bibliographies

The form to be taught at this time might be used by students when listing or referring to a book or when making a reading list, bibliography or footnote.

Use of Encyclopedia

A. Write a topic on the blackboard for which the students are required to find additional sources of information.

B. Through questioning, elicit different sources in which information on this topic may be found.

C. Using a specific set of encyclopedia, draw attention to the publication date, the number of volumes, the location of the index, and the organization of the index

1. The arrangement of the index
2. The purpose of the guide words on each page
3. The method used to indicate where in the encyclopedia set specific information is located
4. Location in the index of volume numbers and page numbers that contain information on the topic

D. Develop for the students the key words in the topic which act as guides to locating required information

1. The key word which indicates the main topic on which information is located
2. The key word or words pointing to information related to the main topic

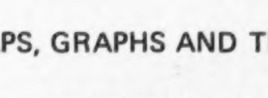
IV MAPS, GRAPHS AND TEXTS

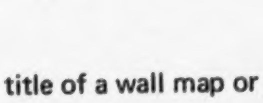
A. Direct the student to read the title of a wall map or a map in the text.

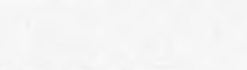
B. Through questioning clarify the difficult vocabulary in the title.

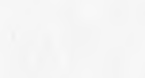
C. Have student examine the map. Through questioning elicit the fact that this map contains some familiar symbols (e.g., heavy black lines = boundary lines that separate states; black dots = important cities; circles with dots in the center = the capitols of states.

D. Elicit the fact that this map contains other symbols which are not familiar to the student, e.g.,









E. Have the student examine all areas surrounding the map to locate the "key" or "legend" that tells the significance of the symbols found on the map.

F. Have the student study the legend that unlocks the meaning of the following unfamiliar symbols:

1. Geometric figures found on the map
2. Colored portions on the map

G. Direct the student to re-examine the "key" carefully.

H. Through specific questions, lead the student to apply the meanings of the geometric symbols to those appearing on the map.

I. Direct the student to apply the meanings of the different colors to those appearing on the map.

J. Review steps A-1. Write them on a chart which will be used as an aid to map-reading.

1. Read the title to determine what the map represents.
2. Examine the map and note the symbols used on it.
3. Locate the "key" or "legend" that explains the meaning of these symbols.
4. Study the meaning of the symbols.
5. Apply the meaning of the symbols to the symbols that appear on the map.

Graphs

NOTE: An understanding of the vocabulary pertinent to this lesson must be developed before the lesson is taught. The meaning of such terms as vertical axis, horizontal axis, interval value etc., must be made clear to prepare students for this lesson.

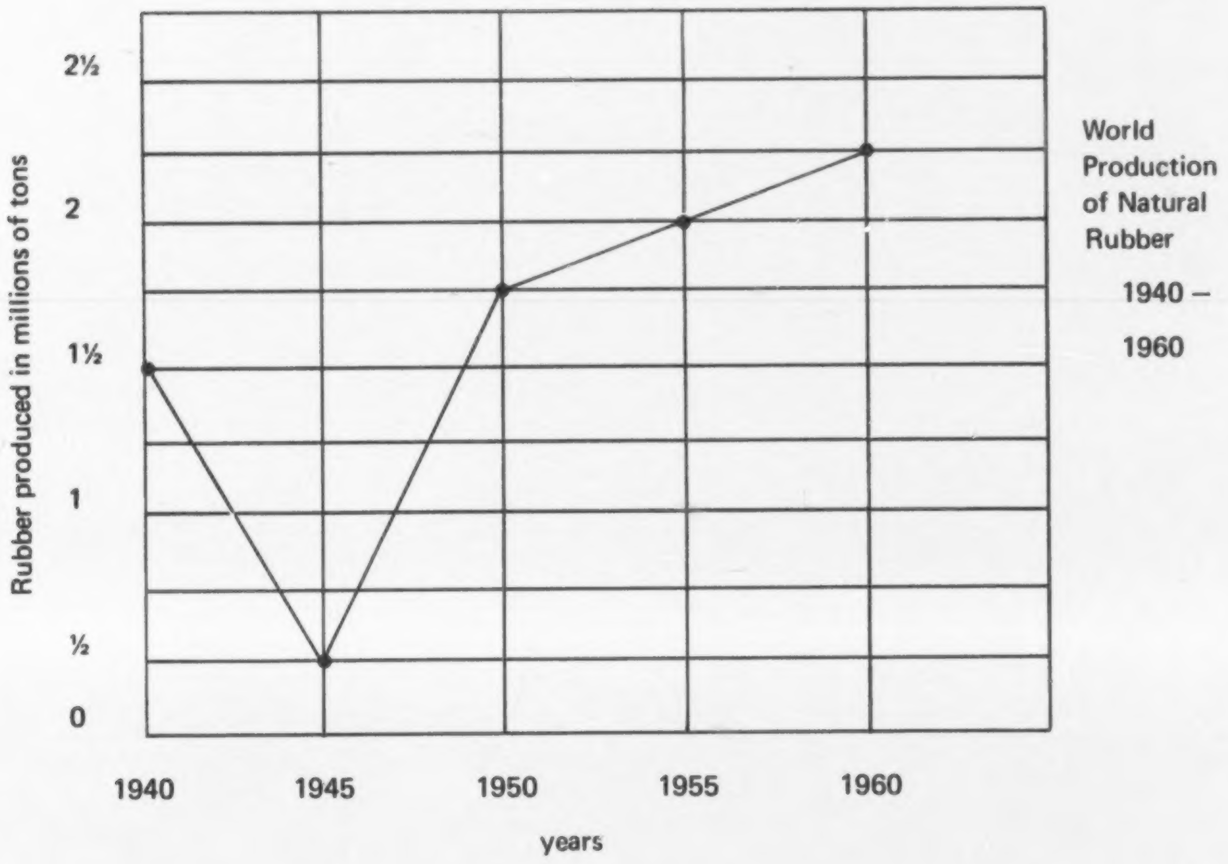
A. Write a paragraph on the board which contains information on the quantity of a specific product produced over a given number of years.

B. Have the student read the paragraph silently; address questions pertinent to the paragraph.

C. Through questioning elicit from the student possible difficulties that might be encountered in remembering facts stated in the paragraph.

D. Information contained in paragraphs of this type can be remembered more easily if facts given in the paragraphs are presented in the form of a graph which can be read and interpreted.

E. Present graph similar to the one following:



F. Direct the student to examine the title of a graph and elicit from the student the information given by the title.

G. The student reads printed material along vertical axis to determine the material being charted.

H. Develop the student's understanding of the scale or interval value used along the vertical axis.

I. Have the student read the printed material along the horizontal axis to determine the informational cues presented on this axis.

J. Direct the student's attention to the dots marked at points on the graph to elicit the significance of the dots.

Graph Recognition Skills

A. Ability to recognize a graph as a particular method for presenting information

B. Ability to recognize the various kinds of graphs

1. Circle graphs
2. Picture graphs
3. Bar graphs
4. Line graphs

Graph Analysis and Interpretation Skills

A. Ability to identify the topic or purpose of the graph through the use of

   1. The title
   2. Other identifying data

B. Ability to read a graph for specific facts and information indicated by units or quantities
   1. Through symbols
   2. Through legends
   3. Through determination of intervals used on axis

C. Ability to interpret data contained in graphs by:
   1. Making 1-1 comparisons to determine exact or approximate quantities
   2. Making comparisons of quantitative data
      a. To find most, least, smallest, largest, etc.
      b. To find averages
      c. To determine general trends or movements
      d. To determine other relationships such as cause and effect
      e. To make predictions or projections going beyond the data; to make logical inferences
      f. To form generalizations based on the data given
      g. Selecting and using information pertinent to a given purpose or problem

Graph Evaluation Skills

The ability to assess a graph for the following features:

A. Clarity of presentation and ease of interpretation

B. Meaningfulness of data in regard to purpose

Graph Construction Skills

A. The ability to recognize data suitable for presentation in graphic form

B. The ability to choose the kind of the kind of graph appropriate to show data involved

C. The ability to choose appropriate scale units

D. The ability to translate data into scale units and to construct various types of graphs by use of the following:
   1. Vertical and horizontal axis for bar and line graphs
   2. Symbols for picture graphs
   3. Circle and sectors for circle graphs
   4. Appropriate titles, symbols and terminology

Vocabulary List for Circle Graphs

Circle graphs

Label
Pie graph
Sector
Slice
Subject
Sub title
Title

Picture graphs

Legend
Picture graph
Subject
Symbol
Title
Vertical axis
Vertical line

Bar graphs

Bar graph
Base line
Grid
Horizontal axis
Horizontal line
Legend
Scale
Scale line
Symbol
Title
Unit
Vertical axis
Vertical line

Bar graphs

Bar graph
Base line
Legend
Line graph
Scale
Scale line
Symbol
Grid
Horizontal axis
Title
Unit
Vertical axis
Vertical line

Tables

A. Recognition Skills

1. The ability to recognize a table as a method of presenting quantitative data
2. The ability to recognize different kinds of tables (single and multiple topics)

B. Analysis and Interpretation Skills

1. The ability to identify the topic or purpose of a table through use of:
    a. The Title
    b. Other identifying data such as column headings.
2. The ability to read a table for specific facts or information through use of the following devices:
    a. Identification of units used including:
        1. Simple cardinal numbers

        2. Cardinal numbers representing hundreds, thousands or other large quantities
        3. Cardinal numbers representing denominate numbers such as bushels, tons
        4. Special symbols such as italics or boldface type
    b. Rows and columns

3. The ability to interpret data presented in tables by making comparisons of data
    a. To find the least, most, etc.
    b. To find averages
    c. To determine trends in data
    d. To determine other relationships such as cause and effect
    e. To make predictions or projections that go beyond data given, to make logical inferences
    f. To form generalizations based on data given

4. The ability to select and use pertinent data for a given purpose or problem

C. *Evaluation Skills*

The ability to evaluate the table and the data included in relation to its purpose

D. *Construction Skills*

1. The ability to recognize data suitable for tabular presentation
2. The ability to choose appropriate units for use in presenting data
3. The ability to translate data into units and to construct a table

Vocabulary list for tables

Average
Column
Column heading
Column subheading
Row
Subject
Title

V Speed and Accuracy

In the intermediate elementary grades instructional effort should be directed toward increasing the child's reading rate while maintaining a high level of comprehension. It is equally important for the child to learn that his rate of reading should vary in accordance with the difficulty level of the material. Effort to increase the child's reading rate is warranted only if the child is proficient in the skills of language analysis and comprehension. Otherwise the effort of increasing reading rate will serve to exacerbate existent reading skill deficiencies.

Techniques for Increasing Reading Rate

A. Expand the number of items in the child's sight vocabulary.

B. Accelerate retrieval rate of sight vocabulary items through tachistoscopic presentation.

C. Provide practice in reading phrases.

D. Accelerate retrieval rate of phrases through tachistoscopic presentation.

E. Accelerate retrieval rate of sentences and paragraphs using mechanical devices such as tachistoscopes and controlled readers.

F. Make use of material below the level of the child's reading proficiency.

G. Make use of nonmechanical devices such as pencils or strips of cardboard moved downward on the page to set and maintain a faster reading rate than normal.

H. Make use of a stop watch to record changes in reading rate.

I. Make use of timed reading selections and comprehension questions to assess degree of accuracy that is maintained with increased reading rate.

VI Other Sources and Processes

Starting with the classroom library and moving from there to school and finally public library, the teacher can direct the child from the simplest to the more complex informational source. The classroom library might be the child's initial contact with a variety of books to which he can go for answers to questions and to explore more deeply an area which interests him. By carefully choosing books for the classroom library, and by setting a simple-to-complex retrieval system based on some sort of cataloguing procedure (the complexity of which is dependent on the maturity of the children), the teacher can initiate experiences in locating information. Because many children are not "in the habit" of questioning and because their attention span may be low in terms of pursuing a question until a satisfactory response is found, motivation becomes a key point here. It is not enough to have children practice with a card catalogue. Even a rudimentary classroom type of catalogue may not be an effective enough procedure to have the teacher pose problems which require this retrieval skill unless the children are vitally involved in its exploration. Having been given a content area – a "set" within which to work, the children themselves can then pose questions for exploration. They can help to arrange books alphabetically in categories. Categorizing a variety of materials would reinforce a skill which is vital when the data are eventually found – that of organizing information into a cohesive and useful package.

A. *INTRODUCING THE LIBRARY*

Learning how the library is arranged:

1. Reference works coded by Letter "R." These may include:
   a. dictionaries
   b. encyclopedias
   c. yearbooks
   d. atlases
   e. gazetteers
   f. biographical reference books
   g. literary reference books
      1. quotation books
      2. poetry anthologies
2. Nonfiction – Dewey Decimal System

   The Dewey Decimal System is the most widely used method of classifying books in a library.

This system classifies books by dividing them into 10 main groups.

000 – 099	General works (encylopedias, bibliographies, periodicals, journals)
100 – 199	Philosophy, psychology
200 – 299	Religion and mythology
300 – 399	Social Sciences (economics, law, sociology and education)
400 – 499	Philology (language, diction, grammar)
500 – 599	Science
600 – 699	Useful Arts
700 – 799	Fine Arts
800 – 899	Literature
900 – 999	History, Geography, Biology

3. Fiction – alphabetically, according to the author's last name

B. *LIBRARY ORGANIZATION*

1. The card catalog for fiction books are alphabetically listed and include:

   a. Catalogue Cards

   There are at least two cards for each book. One card has the name of the book near the top (Title Card). The other card has the name of the author near the top (Author Card). If you don't know the author of a story book you want, look up the title of the book. Under the title will be the author's name. Then you can find the book on the shelf under the author's last name.

Title Card

Johnny Tremain

Forbes, Esther

Author Card

Forbes, Esther

Johnny Tremain

b. Subject card for nonfiction – a third card

An information book (nonfiction) has a card with the title at the top. It will also have a card with the name of the author at the top. In addition it will have a third card. The information book is about a certain subject. That subject will be at the top of the third card.

Subject Card

958 Travel in Texas
S21

Jones, Arthur, 1918-

The Dewey Decimal number will always be indicated in the upper left hand corner.

c. Follow the call numbers on the catalog card to the number of the book on the shelf

Book on Shelf

Travel in
Texas

958
S21

Subject Card in the Card Catalog

958 Travel in Texas
S21

Jones, Arthur, 1918-

HOW THE NUMBERS WORK

Here is how the numbers help you find a nonfiction book. Suppose you want a good book on travel. Follow these steps.

1. Go to the card catalog.
2. Find the drawer marked TR (for TRAVEL).
3. Open the drawer and find the cards marked with the subject TRAVEL.
4. Select a book under TRAVEL.
5. Write down the complete number of that book.
6. Go to the nonfiction books.
7. Find the book that has the number you wrote down.

It is a good idea to write down several numbers for the subject you want. Someone else may be using the first book you want.

d. Magazine Index

The most complete guide to periodicals is the Reader's Guide to Periodical Literature. Introducing this index to the child implies understanding of the term "periodical" as it refers to specific magazines. Periodicals may come out weekly, monthly, bimonthly, quarterly, etc., and it is important to know that such variations exist. Learning to read and interpret symbols in this index is also a necessary skill.

e. House Organs

An awareness by the student that such publications exist.

f. Professional Journals

An awareness by the student that such publications exist.

C. *MEDIA*

The teachers plan units on each *phase of the media* for two reasons: 1. To give the student practice in knowing where to go and what to look for when researching a topic. 2. To acquaint the student with a broader variety of magazines, newspapers, movies, television and radio programs than the student may have been aware of.

1. *Magazines and Newspapers.*

To familiarize the student with current magazines and newspapers the teacher plans the following activities:

a. A preliminary survey of magazines that includes the name and address of the publisher, the price of the publications, the purposes for which the publications are intended, the type of material, the bias or "set" present in the publications.

b. Oral reports on the preliminary survey.

c. Classification of magazines children know under headings such as household, current events, science, travel.

d. Informal oral discussions can be initiated for the following activities:

Do titles of magazines give cues to the content? How are the titles derived? Survey magazines displayed at newsstands, city library! Interview editors, newsdealers, teacher, ministers on magazine reading!

e. A study of individual magazines to be done by the students as a committee assignment. Suggested topics: the magazine's history, the quality and types of fiction, the quantity and quality of the magazine's advertising, the size and physical makeup of the magazine, the quanity and quality of the magazine's illustrations.

f. Practice in the use of magazine reference guides. Slip calling for use of Reader's Guide is distributed to class.

1. Finding reference when author's name is given
2. Finding references when subject is given
3. Preparing bibliography

g. Study of magazine published for pupil use,

Junior and Senior Scholastic
New York, New York
Weekly Reader

h. Fiction in magazines

i. Poetry in magazines

j. Nonfiction in magazines

k. The newspaper –

1. How much time is required for it to be read?
2. Should all the departments be read?
3. In what order?
4. In how many ways may a newspaper be of value?
5. What types of newspapers should be read?
6. What standards should be applied?
7. How do sensational newspapers compare with standard newspapers?
8. How do we determine point of view and bias?

Related projects and problems

1. Start a clipping and picture file
2. Collect cartoons
3. Make a card file providing information about magazines
4. Prepare daily or weekly news review
5. Prepare a display of old newspapers
6. Prepare a class magazine
7. Make a magazine modeled on favorite, e.g. on opposite pages clip a magazine editorial and an original one
8. Make a collection of old American magazines
9. Draw an original design for magazine covers
10. Make a collection of current words and phrases
11. After a study of samples, make a selection of the Nation's six leading newspapers
12. Trace the accuracy of newspaper reports on a single incident (hurricane, flood) over a period of days
13. Make a model newspaper by clipping and arranging materials from large number of papers
14. Show the different uses of *type* in newspaper and magazines. (Visit a typographer's shop)
15. Use the *Reader's Guide* in compiling a summary of views on some questions of current interest
16. Visit a newspaper plant
17. Write reviews of new books, magazines, movies, radio and television programs
18. Write an appraisal of book advertising found in magazines
19. Write an advertisement for a new book that might be inserted in a magazine
20. Prepare scrapbooks of various kinds
21. Prepare specifications for a proposed new magazine
22. Make a comparative study of standard newspapers and sensational newspapers
23. Make a study of AP and UPI policies, methods, etc. (free material is available)
24. Study magazine illustrations of various types: drawings, colored plates, photographs, cartoons, etc.
25. Study joke columns and comics. Discuss what purposes they serve.
26. Recommend a list of magazines for each of the following types: farmer, sportsman, housewife, business man, boy, girl, etc.
27. From a list of writers, actors, etc., make a bibliography and clip reviews

2. *Movies – related problems and projects*

   a. List the methods for choosing a movie recommendation
      1. Recommendations of a friend
      2. Advertising
      3. Type of the film
      4. Reviews
   b. Evaluate above methods
   c. Discuss characteristics of various types of movies:
      shorts, newsreels, cartoons, westerns, musicals, romances, comedies
   d. Write a review of film; compare writer's estimate with professional reviewer
   e. Discuss possibilities of a particular book or story as the basis for a good motion picture
   f. What do the following people do in making movies:
      writer, producer, director, editor, costumer, scenic designer
   g. Discuss censorship

3. *Television and Radio*

   a. Make a survey of listening and viewing habits of the class
   b. Locate and read the schedules in several newspapers
   c. Make a list of and classify various types of radio and television programs: newscasts, sports, variety, dramatic, audience participation, mystery, interviews, "disc jockey," daytime serials
   d. Discuss what the listener or the viewer gains from each type of program
   e. Read the reviews of programs
   f. Write a review
   g. Compare the reactions of two or more reviewers to the same program
   h. Nominate programs for awards
   i. Investigate the functions of such persons as:
      television or radio producer, director, script writer, sound engineer
   j. Make a radio or television adaptation of a story read in class and tape it
   k. Analyze the difference between news reports and news commentaries
   l. Discuss and evaluate advertising
   m. Discuss the role of listener
   n. Discuss humor
   o. Compare the offerings on radio with those on television as to quality and variety

D. *RESOURCES IN THE COMMUNITY*

Much information is to be found first hand through resources in the community: persons with specialized information and interests, industry, places and things of historical interest, natural environment, museums and local government. Locating information does not have to be restricted to the written page. In many cases information is obtainable from the actual things about which books are written. The latter source gives a vicarious account while the former provides first-hand information.

E. *OUTLINING*

Extrapolating the main idea and supporting evidence from a paragraph.

1. Copy on the blackboard a short paragraph
2. Clarify the meanings of difficult words included in the paragraph
3. State that there is a simple method for finding the main idea when it is expressed in any part of the paragraph
4. Direct the students to read the passage silently to get the general impression of the paragraph as a whole
5. Question the students about possible titles for the paragraph – write on board
6. Request that the students read the paragraph again to select the best title
7. Request that the students find a sentence in the paragraph that suggests the title. Indicate that this sentence in the paragraph conveys the main idea
8. Underline the title and the main-idea sentence and have the pupils note its position in the paragraph
9. Prove that each detail-sentence in the paragraph relates to the main-idea sentence
10. Draw the students' attention to clue words that indicate the sequential order of the details of the paragraph

F. *EVALUATING RELEVANT DATA*

A. *Reading Critically*

The ability to read critically cannot be left to chance development. It must be taught systematically in order that students may develop the ability to judge the validity of statements found in printed material. Students must be taught how to recognize slanted writings and biased opinions as they read in order to distinguish them from provable facts. A suggested procedure for developing the ability to distinguish between fact and opinion is as follows:

1. Read a statement and ask the students to determine whether this is a statement of opinion or fact
2. Question the students about statements of fact and opinion encountered in daily readings (news reports, editorials, political speeches, advertisements)
3. Explain that reporters use clue words to indicate that they are expressing opinions. Elicit examples (e.g. claims, believes, thinks, considers, said to be, probable)
4. Inquire which items in step 3 might express opinions without clue words. (advertisements, political speeches, editorials). Why?
5. Discuss how the student can tell that a statement is an opinion rather than a fact without clue words

In addition, teachers might instruct students in the following:

1. Recognizing and questioning the validity of generalized statements
   Example: The best cameras come from Germany
2. Recognizing the devices used to slant statements for the author's purpose
   a. Words or phrases quoted out of context
   b. Irony or sarcasm
   c. Emotional language intended to prejudice
   d. Exaggerated claims

Teacher's Plan For The Development of Critical Evaluation Skills

There are various ways in which the child can respond to tasks. For more advanced students, the response can be written. If oral responses are preferred, allowing for pupil interaction and more immediate teacher direction, the teacher might write responses on a chart or the blackboard or tape them.

An important distinction in the exercises described previously involves the vicarious or second-hand proof (books, human source, family "legend" or hearsay) and the first-hand or pupil-manipulated proof (scientific measurement, experimentation by visual, auditory or haptic senses). The former type of proof involves the child in determining the relative or absolute validity and reliability of a source, e.g., some books and human sources are more reliable than others depending on the credentials, reputation and subjective evaluation of that source.

The teacher can help to make the child aware of this distinction and also of the subjectivity of certain so-called "proofs." A statement verified by the senses may be acceptable if it conforms with a general definition of a situation given by a majority of people.

Direct the student to underline the part of each sentence that is a statement of opinion. Circle the cue words in each sentence.

Example: John claims he knows all the answers to our questions

1. The weatherman believes it will rain tomorrow.
2. The Beatles think they are better singers than the Rolling Stones.
3. Tom feels that Betty doesn't like him.

I. Write F for fact and O for opinion in the blank spaces before each of the following sentences:

1. President Johnson is a good president.
2. President Johnson was the president following John F. Kennedy.
3. Boys are smarter than girls.
4. Roger Maris is a better player than Sandy Koufax.
5. This winter will probably be colder than last winter.
6. You will be older next year than you are this year.
7. You will watch more television next year than you did this year.
8. The Chevrolet is a much better car than the Pontiac.

II. Mark the sentences which you could prove to be true or false and tell how you could do so:

1. John is 6 feet 3 inches tall.
2. Sally is a beautiful girl.
3. Joe weighs 140 pounds.
4. Carmen looks silly with that hat on.
5. Mike can lift a box that weighs 60 pounds.
6. Frankenstein's monster is ugly.
7. It's going to rain at 3:00 this afternoon.
8. That table is 34½ inches long.

III. Explain the ways in which the following statements can be proved true or false, or if they cannot be proved:

1. Billy has brown hair now but he had blond hair when he was a baby.
2. Frank's dog bit 3 people last year.
3. Calvin was born on July 3, 1955.
4. If a person is *nefarious* it means he is *evil*.
5. Nancy told me that she was "teacher's pet" last year.
6. At 7:30 p.m. the news commentator said that all schools would be closed tomorrow.
7. Doctor James said that very few people caught flu this year.
8. My principal says that 300 students attend this school.
9. The Supremes have made 10 long-playing record albums.
10. There was a movie about Frankenstein's monster on television last night.
11. Helen Keller was blind and deaf and she learned how to speak, to read and to write.
12. John says he is the tallest boy in the school.
13. Kevin says he can stand on his head longer than Frank.
14. Kevin says he can eat more hamburgers than his great grandfather could when he was alive.
15. That kitten's fur is soft.
16. Very few people caught German Measles this year.
17. 300 students attend this school.
18. We were all very happy at the dance last night.
19. Three of us are going to the movies next Saturday.

IV. Ways we express sarcasm

1. Tone of voice, inflection, rising inflection
2. Contradictions
   e.g., response to idiotic situation,
   "You're a bright one!"
3. Making a statement into a question
   e.g., "That's a beautiful hat?"

UNIT II CHAPTER 10

SEQUENCE OF AESTHETIC EXPRESSION SKILLS

SECTION 1: SOCIODRAMA

The material presented in this section is viewed by the staff as content generally effective for all children and particularly effective when coupled with appropriate strategies for the emotionally disturbed, behaviorally disordered child.

The piece of The Taxonomy that is applicable to this section's content (Sociodrama) has been reproduced below. All the suggested Sociodrama activities can be specified in the taxonomic code numbers and language terms of Basic Skill 5, the Subskills of Basic Skill 5 and the appropriate Sequential Levels. A three-digit code number — 5, a possible code number range of 1-3, a possible code number range of 1-5 — desinates every item of Sociodrama that is described in this section.

THE WHAT OF INSTRUCTION

Basic Skill	Subskills	Sequential Levels
5. Aesthetic Expression	1. Perception	1. Grades 2 and Below
	2. Interpretation	2. Grades 2-4
	3. Creation	3. Grades 4-6
		4. Grades 6 and Above
		5. Ungradable

Sociodrama: Purpose

An unrehearsed dramatization in which the playser attempt to make a situation clear to themselves by role playing is called a sociodrama. The purpose of a sociodrama is to give the role players the empathetic understanding of other people and other situations that may not be part of the student's experiential background. Sociodrama is not to be confused with improvisation. Improvisation is the act of composing and rendering extemporaneously, i.e., an impromptu invention or accomplishment. Role playing is initiated by a skeletal situation in which the role players build and develop story, plot, characterization, etc. Sociodrama may be used in understanding historical as well as social interpretations. For example, a sociodrama may be used to give an understanding of the first Thanksgiving Day or of the Boston Tea Party. From a sociodrama of this sort, the pupils may come to understand more fully the historical factors and tenor of the times being studied.

Physical activity is an inherent part of sociodrama. Because of this, sociodrama lends itself to the education of the emotionally disturbed. Such a population has a much higher receptivity which can be guided into creative channels. Sociodrama gives the emotionally disturbed child the ability to see things dramatically that cannot be seen intellectually. Sociodrama is viewed as an educational technique that is generally effective for all children and when coupled with appropriate strategies may be particularly effective for the target population.

Sociodrama may teach social values, for example, how prejudice affects both the prejudiced and the prejudiced against. In sociodrama, the players, in attempting to show the emotions of the characters they portray, will hopefully become more aware of their feelings in specific social situations.

Preparing for the Sociodrama

Even though there is no script or rehearsal, sociodramas do require some minimal preparation. The pupils must understand the situation and setting they will present. The teacher must make sure that the students not only understand the situation they will present, but that they realize the purpose of their parts in the total effect. It is crucial that the audience (those students not in the sociodrama) also comprehends the purpose of the sociodrama and what they should look for as the drama is being presented. It should be noted that the sociodrama is not entertainment although it may be enjoyable. The sociodrama is an educational technique which clarifies a difficult social, or historical situation, or concept.

Selecting the Cast

Since serious effort on the part of the role player is essential, great effort must be used in selecting the cast. The players should be selected primarily from volunteers, but sometimes the most eager volunteers seem quite incapable of carrying out the roles. The teacher may then have to find understudies for the cast or have two separate casts.

Because the pattern of a sociodrama is loose, there is always a danger that inexperienced role players may lose sight of their roles. It is better for the teacher to interrupt the production than to present false information to the class. After the presentation, a discussion period is excellent as a follow-up activity. This may indeed be the most worth while part of the entire presentation.

Implementation

Sample Sociodramas – Three boys coming to school on a bus find a wallet with $100 in it. The wallet contains the identification of the owner and his address. Show what these boys would say and do.

Four boys are "fooling around" with a knife. They're pretending they are in a gang. Suddenly one of the boys gets seriously hurt and may die. Suppose you were those four boys. What would you say and do?

Suppose you are the teacher and you are talking to the father of one of your students. You feel the student is going to fail because he doesn't seem to have any interest in his work. The student is also there at the conference. As a teacher, what would you say to the father and your student?

Some Follow-up Activities

1. Perform the sociodrama.
2. Tape the sociodrama.
3. Have role players remember the drama and write up a tentative script. The nonparticipating students may want to write what they would have said. If necessary listen to the tape.
4. Have students write the script for the sociodrama using correct dramatic form.
5. Use *Dictionary of Dramatic Terms* for the development of phonic skills and a sight vocabulary.
6. Have students expand script building characterization, plot, and/or other dramatic aspects.
7. Have students label the type of play they created.
8. When the scripts are finished have them typed on ditto and presented to the class.

THE PLAY

In music the primary purpose of a score is to be played rather than read; so in drama the script of a play is primarily to be acted rather than read. This is not to say that aesthetic values may not be obtained from the reading of a script. The above statement merely implies that scripts of plays should have the purpose of being dramatically interpreted through dramatic readings and actions.

Any unit on drama necessitates general and specific goals. The goals presented below are only some of the more obvious and pertinent ones of the writer. Other goals may, of course, be added according to the content of instruction.

Goals:

To read widely in the field of drama in order to develop the ability to recognize literary strengths and weaknesses in the structure of widely different plays

To develop the ability to recognize the opportunities for dramatization and the dramatic limitations inherent in plays

To understand the various components of a play and the different types of plays

To develop creative use of imagination

To learn to select a dramatic theme, outline and develop a simple plot, develop elementary characterizations, write simple dialogue, make cuttings (or deletions) of plays

To become acquainted with contemporary dramatic criticism, local theatres, and their productions

To be able to compare plays and make a selection of a play for production considering the purpose of the performance, the audience, the actors, the stage, and other practical matters

Content:

I. Basic types of plays

Tragedy:	story of human suffering; leading character is defeated
Comedy:	a drama in which the leading character wins; based on characterization or situation; generally light and humorous but not always so
Melodrama:	play depending on situation; characters may be types rather than individuals; sensational, extravagant, happy ending
Farce:	play in which the plot depends on situation, not on character development; broadly humorous
Fantasy:	imaginative, fanciful drama; usually happy atmosphere
Folk Play:	drama based on legend
Allegory:	play in which obvious action carries a hidden meaning; i.e. symbolically, etc.
Satire:	play in which vices and follies are held up to ridicule
Musical Play:	dramatic form in which story and music are combined to form a unified presentation

Combinations of two or more of the above-listed types

II. Elements within a play:

Theme:	underlying idea, unobtrusive, serves to unify play; given more or less emphasis depending on the purpose of the playwright

Plot: arrangement of incidents according to the writer's plan by which the conflict is carried to a climax and its solution

- contains introduction and exposition
- contains rising action and suspense
- reaches a climax
- contains falling action and solution

Setting: environment of the play; place, year, or historical period, time of day, atmosphere or mood.

Dialogue: spoken lines compatible with other elements which establish character and mood, and serve to carry the plot to its conclusion

Characterization: portrayal of a person by the actor's speech, action, and appearance (see Appendix 4)

III. Elements which contribute to enjoyment of a play:

An alive and receptive imagination

Worth while content in the play

Excellent handling of technical elements of production

Fine acting

Sufficient background (gained by intelligent reading of the play and experience with dramatic presentations)

An appreciative, cultivated audience

IV. Measures for evaluation of a play:

Is the play a well-constructed dramatic unit?

Is it presented as a well-correlated piece? That is, do the scenery, lights, costumes, make-up, and acting present a consistent picture?

Activities

Discuss the various forms of drama and read brief examples of each in class.

Have students read and collect examples of various types of plays.

Discuss a play in which various types are blended as in *Our Town*, or in a play by Saroyan, or another playwright.

Develop familiarity with such terms as the following:

- act
- ad lib
- amateur
- anticlimax
- casting
- character part
- climax
- cue
- dialogue
- dramatic criticism
- fourth wall
- lead
- lines
- monologue
- prompt book
- scene

Write original dramatic scenes and one-act plays.

Read original scenes and one-act plays for class discussion and evaluation.

Prepare the best original scenes and one-act plays for presentation in class.

Select a group of play which would aid an audience in developing ethical standards of behavior.

Attend amateur and professional dramatic performances preceded and followed by class discussion.

Condense a play and read it to the class.

Write a one-act play giving close attention to plotting, character-revealing dialogue, mood, ease of production.

Read two such plays the *The Valiant*, by Hall-Middlemass, and *Trifles*, by Sheriff, as examples of tragedy.

Write a short parody of a scene from a serious play.

Make a collection of pictures of stage sets. Discuss reasons for the artists' presentations and appropriateness of settings.

Play recordings as background for readings from plays to indicate how music aids in establishing atmosphere or mood.

Collect samples of dramatic dialogue which point up characterization, progression of plot, mood.

Listen to records of plays and compare them to evaluate quality.

Discuss rising action, climax, in specific short plays.

Discuss elements of conflict in short scenes.

Make a collection of newspaper, or magazine articles, which might serve as the foundation for plays, and discuss the possible handling of structural elements.

Visit local theatres which present plays to become familiar with their schedules and programs.

Select a play for school production evaluating such factors as the following: wholesome entertainment value, audience appeal, capacity to raise standards of the audience, suitability for school.

Analyze a group of characters for cultural background, physical and vocal characteristics, personal habits and attitudes, social and financial position.

Become familiar with the physical parts of stage and costumes (see Appendices 1, 2, 3, 5, 6.)

PLAY PUBLISHERS

Dramatists Play Service, 14 E. 38th St., New York 16, N.Y.
Baker's Plays, 569 Boyleston Street, Boston 16, Mass.
Samuel French, 25 W. 45th St., New York 19, N.Y.
Dramatic Publishing Co., 179 N. Michigan Avenue, Chicago, Illinois.

The above play publishers will gladly furnish free catalogues of all their plays. In addition, Walker Educational Book Corporation, New York, New York, has published a series of plays adapted from famous short stories and novels. These plays are written on an elementary reading level and are extremely suitable for classroom or assembly presentations. Some of the titles include: *The Cask of Amontillado* by Edgar Allen Poe, *The Necklace* by Guy de Maupassant, *The Outcast of Poker Flat* by Bret Harte.

DICTIONARY OF DRAMATIC TERMS

A

action

1. The physical movement of an actor on the stage. 2. The movement or development of the plot of a dramatic composition, or an incident in the movement as it is revealed or meant to be revealed by actors on the stage through dialogue or physical movement.

adaptation

A reworking, as of a novel, into dramatic form.

ad lib; ad-lib

To add lines or business not in the script.

allegory

A dramatic work expressing meaning metaphorically by means of personification and symbolism.

antagonist

A principal role opposed to that of the protagonist (hero); often the villain.

anticlimax

A point in a dramatic piece after the climax which lessens the effect of the climax.

apron

The part of the stage floor in front of the curtain line (see Appendix B).

atmosphere

The mood, the general emotional quality of a dramatic piece.

B

back drop

A large curtain painted to represent some background, dropped upstage to form the back of a wing set and to mask the backstage space; now commonly supplanted by a cyclorama.

background

1. The setting or scenic display before which actors perform. 2. Previous events; environment.

C

cast

1. To assign or be assigned to an acting role; hence, casting. 2. Short for cast of characters; cast list.

character

1. One of the dramatis personae; an actor in such a role. 2. A type of personality portrayed on the stage. 3. Short for character actor.

character actor

An actor who specializes in one or more striking roles which call for characteristics quite different from his own, as the roles of old men.

character part

An acting role calling for emphasis on the characteristic peculiarities of a type as, the amorous old man, the shrewish woman, the foreigner with the accent.

chorus

1. A group of singers or dancers performing as a unit; a song or part of a song to be sung by more than one person.

climax

The point in a dramatic work at which the interest is most intense. In acting, a rising climax is marked by quicker movement and a higher pitch of the voice, a falling climax by no less suspense but by a seemingly calmer demonstration of intensity.

comedian

1. A person who acts in comic roles. Feminine form, comedienne. 2. A writer of comedies.

comedy

Drama – generally light and humorous with a happy ending; comedy is more thoughtful than farce.

copyright

A legal privilege enabling the owner of a dramatic piece to control its performance and publication for 56 years in the United States, and 50 yeats from the death of the author in Great Britain; also, to register a dramatic work for copyright.

costume

An actor's stage clothing; to design, make, or wear such clothing; hence, costume designer, costuming, etc.

critic

A person qualified by profession, or scholarship, to pass judgement upon dramatic presentation; hence, criticism, etc.

cue

A signal to notify an actor that it is time to begin a speech; also, to give such a signal.

curtain

A movable screen of cloth used to conceal all or part of the stage, and also to provide scenic effect.

curtain call

The appearance of an actor(s) at the end of a performance, or an act, in response to applause after the fall of the curtain.

cyclorama

A curving drop curtain for an exterior stage setting used to represent the sky or open space, to mask the rear and sides of the stage, and to aid in certain light effects (see Appendix F).

D

development

1. In dramatic construction, the events after the exposition which complicate the plot; a logical series in cause and effect. 2. In characterization, a change and expansion in character traits within a dramatic piece.

dialect play

A play relying heavily on character parts requiring the simulation of local or foreign accents.

dialogue; dialog

1. Lines in a stage entertainment or dramatic work, those in which at least two persons take part.

dramatist

The writer of a dramatic work.

dramatize

To make into, or express as drama, by converting a non-dramatic work into dramatic form; hence, dramatization, dramatizer, etc.

dress rehearsal

A complete rehearsal, in costume, usually the last one before the opening night.

E

encore

A call, or summons, by an audience's shouting and applauding for the reappearance of performers, for the re-enactment of a portion of the performance.

entrance

An actor's entry onstage; hence, to make an entrance, especially when an actor enters in an effective or spectacular manner.

epilogue; epilog
A scene or speech following a performance.

episode
An incident.

exit
1. A going off stage. To go off stage; "he goes out" (a stage direction); hence, also exit speech. 2. A place at which an actor goes off stage. 3. A door through which patrons may leave the theatre; hence, emergency exit door, exit light, exit sign, etc.

exit line
A line of dialogue spoken by an actor as he goes off stage.

exposition
An explanation of events preceding the beginning of a dramatic piece which an audience needs to know.

exterior (scene)
A scene out-of-doors; a flat representing part of such a scene; hence, exterior backing, exterior setting, etc.

extra
An actor who speaks no lines, or speaks lines only as a member of a crowd, but who comes onstage for minor participation in a performance.

F

fantasy
A play, or other entertainment, which is imaginative and fanciful rather than realistic.

farce
A broadly humorous dramatic composition which is based on improbable situations and is unsubtle in idea or characterization.

finale
The last song; the closing ensemble number of a show.

flop
An utter failure (as stage production or actor).

footlight

A lighting unit with a reflection installed in the floor across part of the width of the stage parallel to the curtain line and usually in front of it, and hooded on the auditorium side (see Appendix C).

freeze

In acting, to hold, to keep motionless especially while the audience laughs

G

gag

Any stage jest derived visibly, or audibly, from lines or situations.

gesture

In acting, a movement of the limbs, or body, as a means of dramatic expression.

grease paint

A cosmetic used in making up for the stage.

group scene

A scene in which several actors participate.

H

ham

To act badly, or to overact.

historical drama

A dramatic composition based on historical events.

I

illusion

In stage production, a method or style which attempts to create the illusion of reality, to simulate real life, to ignore theatrical conventions.

impersonate

To act a role.

improvise

To invent lines, or business, not in a script, to ad-lib.

ingenue

The role of a sweet, naive girl; an actress who plays such a role or roles.

intermission

A period between acts or scenes.

intrigue

The plot complications of a play.

J

juvenile

The role of a boy or young man; an actor who plays such a role.

L

laugh line

A line of dialogue which is calculated to produce a laugh from the audience.

M

main plot

In a dramatic work, the principal plot, when there is a subplot.

make-up; makeup

To change the appearance of one's face and other exposed surfaces of the body for acting, by means of cosmetics, false hair, etc., in order to emphasize characteristics appropriate to one's role.

marquee

A canopy which projects over a theatre entrance towards the street, usually bearing lettering to advertise the names of the theatre, the current production, the star, etc. (see Appendix E).

mask

A covering worn by an actor to conceal his face or head; also, to put on, to wear such a covering (see Appendix G).

matinee

An afternoon or sometimes a morning performance.

melodrama

A play which is sensational, implausible in characterization, dialogue, and situation, abounds in thrilling struggles between exaggerated heroic and villainous figures, and ends happily in the romantic triumph of virtue.

mime

To act, especially to act in pantomime.

mimic

To imitate, copy, simulate, impersonate.

mob scene

A scene in which a crowd of actors participates.

modern drama

The contemporary or recent drama; the drama of Europe and America beginning with the plays of Ibsen; the drama of the modern world.

modern dress; modern-dress

Said of a dramatic production which is costumed in the dress of today, rather than in the dress ordinarily worn in the period of which the action is supposed to be taking place; hence, in modern dress.

musical (comedy)

A dramatic entertainment with a light comedy plot, dances, songs, spoken dialogue and spectacle.

musical (play)

A play to which music has been added, a type of drama usually more substantial and realistic than musical comedy but interspersed with songs.

N

narrator

An actor whose role is one of commentator in a dramatic production.

O

off stage; off-stage; offstage

That part of the stage which is not visible to the audience and which lies outside the acting area; also, away from the center of the stage.

orchestra

1. The seating area on the main level of an auditorium; hence, the orchestra floor, an orchestra seat. 2. Collectively, the persons who play music in a theatre; the instrumentalists.

overture

Introductory music played before the beginning of a performance or act.

P

parody

A dramatic composition, or any stage activity, which imitates in order to burlesque or ridicule.

pause

In acting, a short delay in dialoque, gesture, or movement, in order to achieve emphasis or suspense.

peanut gallery (or heaven)

A term, used in the U.S. only, for the topmost seating area in a theatre.

performance

1. A showing of a dramatic entertainment. 2. An actor's execution of his role.

personify

To characterize; also to give life to an abstract characterization, for example, honesty, freedom.

play

A piece of writing compsed for, or as if for, stage production; telling a story by means of dialogue (or pantomine); a drama.

playwright

A dramatist

plot

The amplified story of a dramatic piece, as a succession of unfolding situations.

premiere

The first public performance of a dramatic composition.

preview

A try-out performance before an invited audience.

principal (actor)

An actor who has an important role; an actor who speaks, rather than a walk-on.

production

Collectively, the staging of a dramatic work including the following theatrical matters: financing, management, direction, acting, costuming, lighting, making-up, scenic design, and construction.

prompt

To tell an actor what speech, or action, is required of him, especially when he forgets during a performance.

prompter

A person who is charged with prompting.

property; prop (short form)

Any object used on the stage, except scenery, lights, and costumes.

prop rehearsal

A rehearsal during which actors can familiarize themselves with the properties they will encounter during their performance.

punch line

A line of dialogue which carries particular emphasis for dramatic or comic effect.

R

realism

In compsition and production, an aesthetic attempt to make a dramatic piece reproduce real life.

rehearsal

A practice session to prepare a production for public performance.

repertory

A group of plays which a company has been trained to perform and which are usually played alternately and are repeatedly revived.on

role

A character in a dramatic work portrayed on the stage by an actor.

royalty

A payment made to an author for the production or publication of a copyrighted dramatic piece, normally a fixed percentage of the profits.

S

social drama

Dramas dealing with man in his social environment, social problems, social life.

solo

To sing or dance alone; a song, dance, etc., performed alone usually in musical comedy; hence, solo dancer, soloist.

spot light; spot-light; spotlight; spot (short form)

A lighting instrument used to provide sharp, intense illumination for a specific portion of the stage; hence spot-lighting.

stage

A platform or floor for dramatic performances. Also, to produce a dramatic composition on the stage, to make the preparations (especially the scenic and acting preparations) for a dramatic representation.

stage area

A portion of the stage, one of the six or more sections into which the acting area is commonly divided, down center, up center, down right, up right, down left, up left (see Appendix C).

satire

A dramatic work emphasizing ridicule.

scenario

A detailed outline, a synopsis of a dramatic composition.

scene

1. A division of a dramatic work smaller than an act; any portion of a dramatic work taken by itself as a unit of action; hence, balcony scene, mob scene, scene III, etc. 2. Scenery, scenic hangings and pieces, scenic background, a stage setting; hence, behind the scenes, exterior scene, scene-builder, scene design, etc. 3. The location in which a dramatic action is supposed to occur as, The scene is Rome.

score

The musical text for a musical dramatic work.

set

Short for setting. An arrangement of scenery, properties, and lights to represent the locale in a dramatic performance.

skit

A short comic act or sketch, often one which is satirical.

stage direction; stage-direction

In a script, an indication of the expected stage action or other production arrangements.

stage director; director (short form)

A person to whom the producer assigns the responsibility for the integration of an entire production, from the basic interpretation of the text through all the acting and technical phases up to the time of first performance when the stage manager takes over.

stage hand; stagehand
A person who sets the stage, changes scenery, and performs other duties.

star
The leading actor, or actress, in a production whose name usually precedes the title of the dramatic composition in the billing; and actor or actress who has attained pre-eminence in the theatrical world.

steal
An actor's seizure of the attention of the audience when he has no right to it as by unfairly moving upstage center so that he commands the best position, forcing other actors to turn their backs to the spectators.

stock company; stock-company
An acting company having its own theatre and a series of plays to be produced in repertory.

straight man
An actor who has a straight role rather than a character part.

T

theatre; theater
A building housing a stage for dramatic performances.

tragedy
A play which is serious, usually fatally, for the central figuer.

tragic flaw
A trait of character in the principal figure of a tragedy which leads to his doom; the outward error proceeding from such a trait.

transitional scene
A scene of no particular dramatic importance in itself, but serving to connect two important scenes.

triangle play
A play delaing with the love entanglements of two men and one woman, or two women and one man.

trilogy
A group of three plays dealing progressively with a single general dramatic action.

turkey
A show which fails deservedly.

type
An actor suited to one kind of role.

U

understudy
To learn the role of another actor so that if necessary one may take his place; also, an actor (almost always a member of the cast) who so prepares himself.

V

villain; villainess (feminine)
An antagonist; and evil figure.

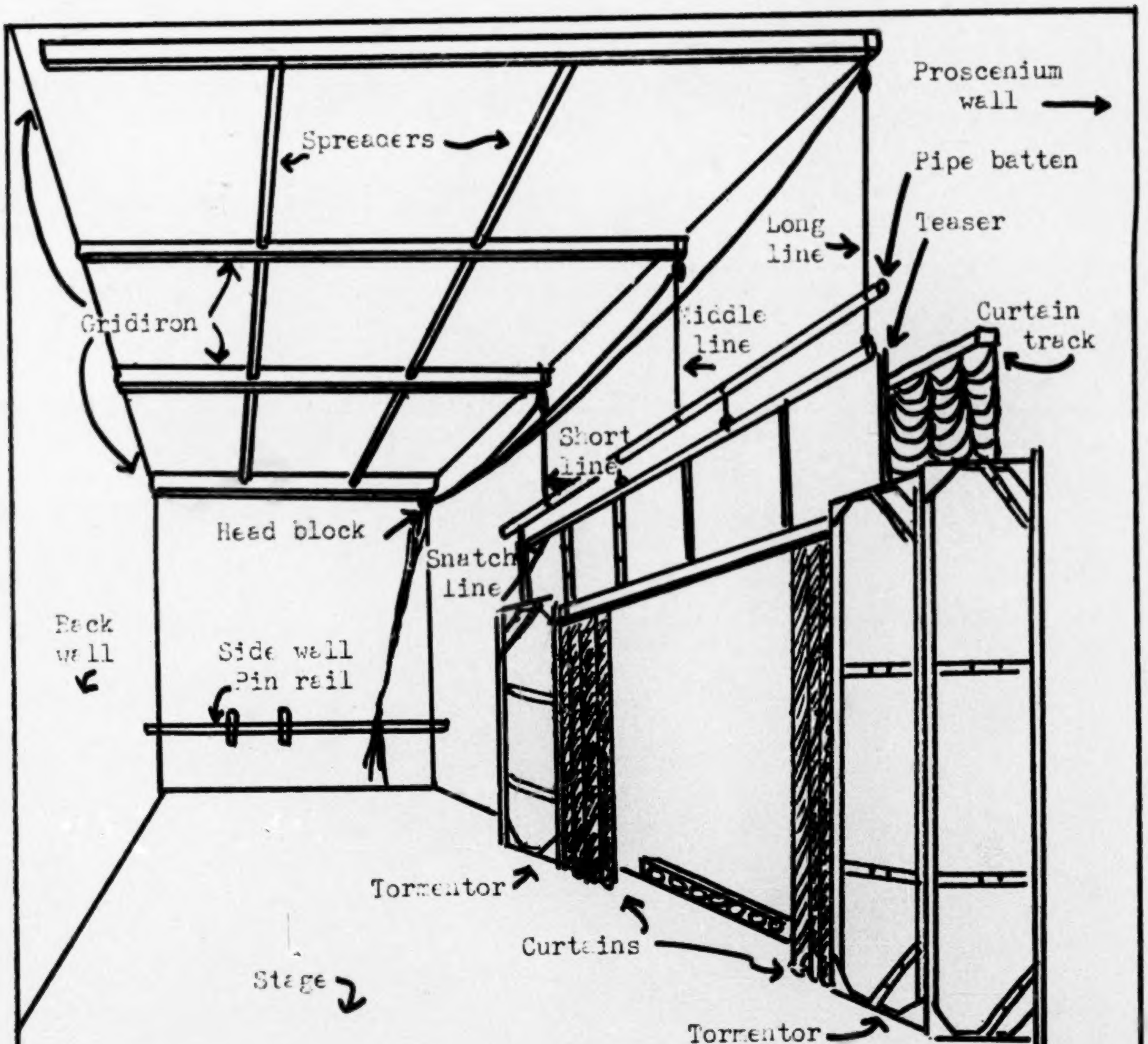
W

walker-on
An actor in a walk-on part; and actor who plays such parts more or less regularly.

wardrobe
Stage costumes assembled for use in stage productions; also, a room for their storage and repair.

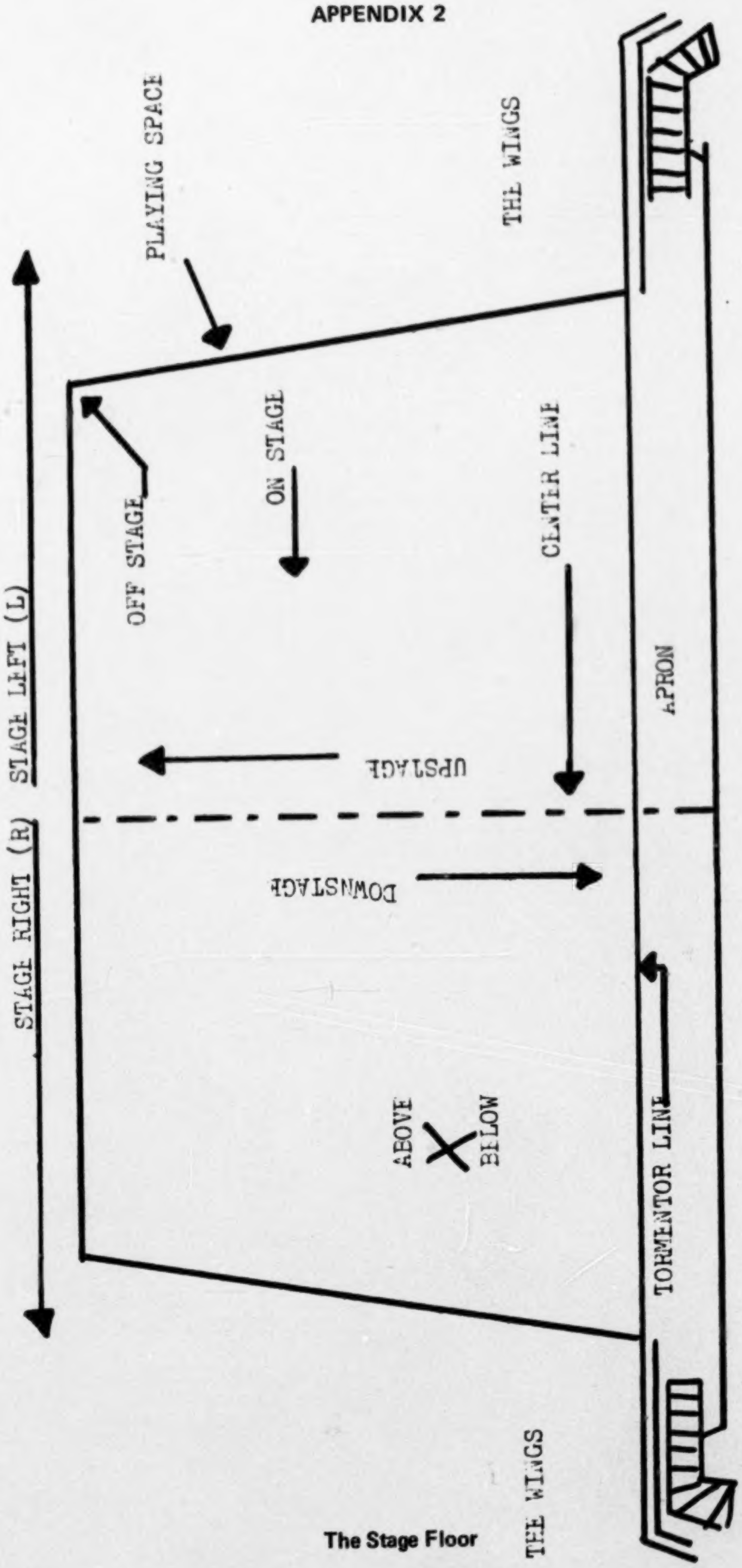
wings
The spaces to the right or left of the stage in a theatre (see Appendix B).

APPENDIX 1



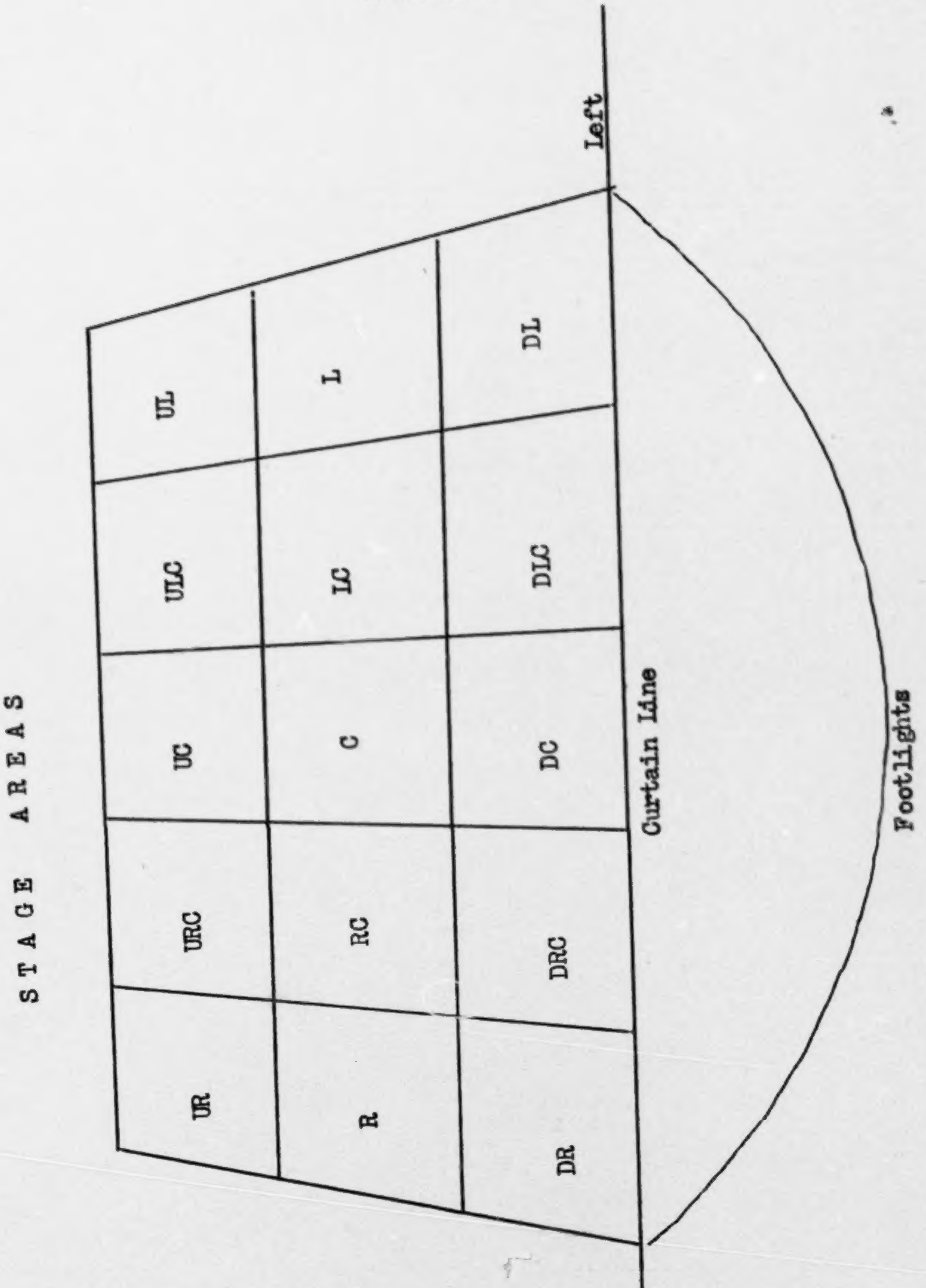
The Stage Interior

APPENDIX 2



The Stage Floor

APPENDIX 3



Stage Areas

APPENDIX 4

THE BONE STRUCTURE OF A CHARACTER

PHYSIOLOGICAL

1. Sex
2. Age
3. Height and weight
4. Color of hair, eyes, skin
5. Posture
6. Appearance: good-looking, over- or underweight, clean, neat, pleasant, untidy. Shape of head, face, limbs
7. Defects: deformities, abnormalities, birthmarks, diseases
8. Heredity

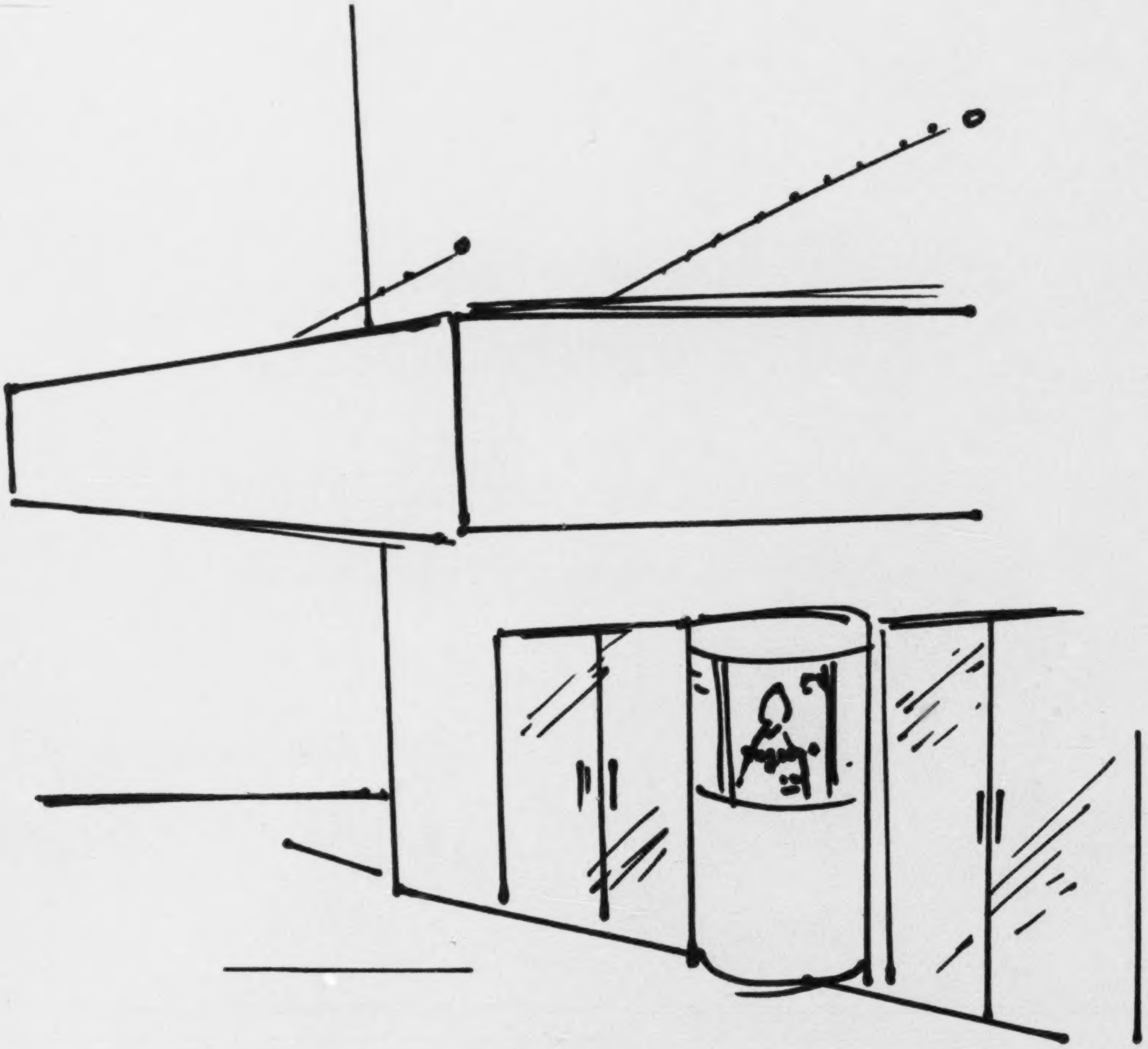
SOCIOLOGICAL

1. Class: working, ruling, middle
2. Occupation: type of work, hours, income, condition of work, union or nonunion, attitude toward organization, suitability for work
3. Education: amount, kind of schools, marks, favorite subjects, poorest subjects, aptitudes
4. Home life: parents living, earning power, orphans, parents separated or divorced, parents' vices, neglect. Character's marital status.
5. Religion
6. Race, nationality
7. Place in community: leader among friends, clubs, sports.
8. Political affiliations
9. Amusements, hobbies: books, newspapers, magazines he reads, etc.

PSYCHOLOGICAL

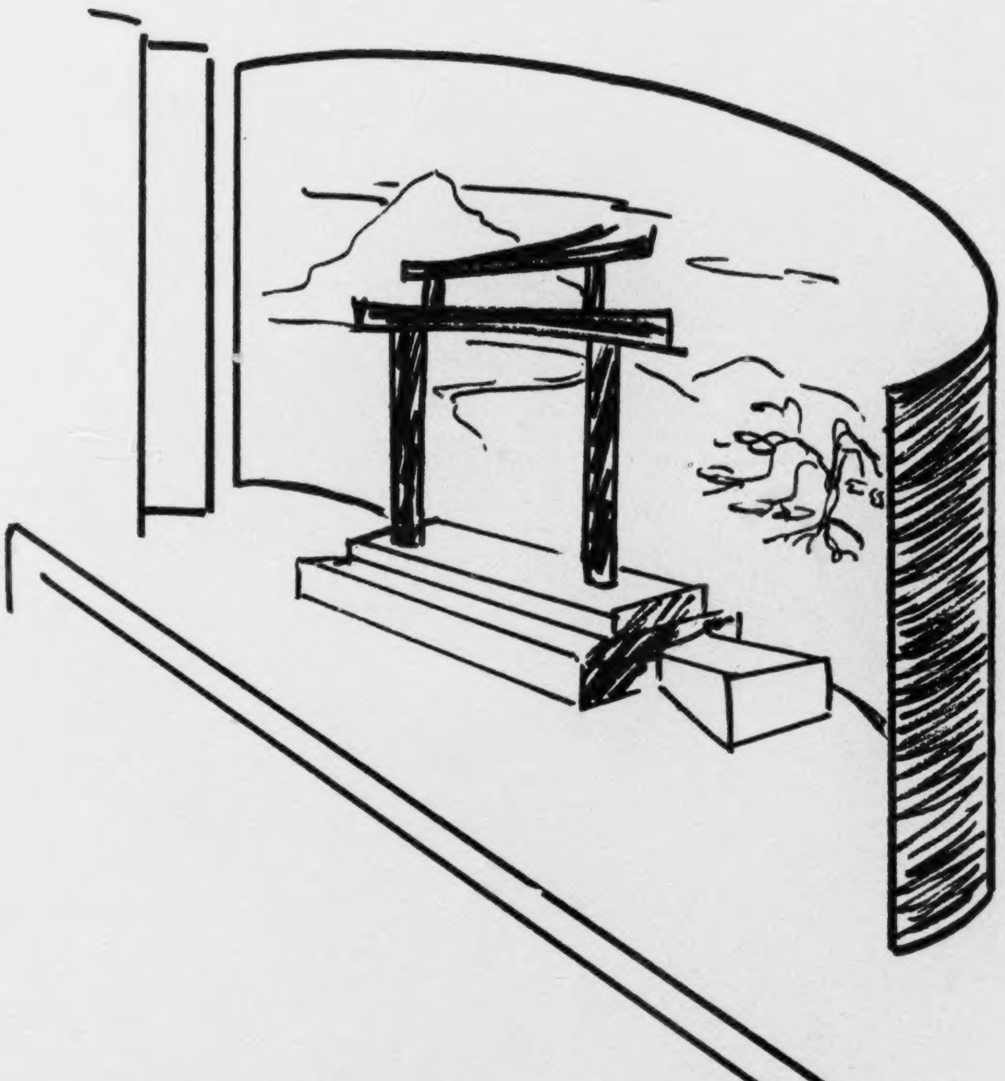
1. Sex life, moral standards
2. Personal premise, ambition
3. Frustrations, chief disappointments
4. Temperament: choleric, easygoing, pessimistic, optimistic
5. Attitude toward life: resigned, militant, defeatist
6. Complexes: obsessions, inhibitions, superstitions, manias, phobias
7. Extrovert, introvert, ambivert
8. Abilities: languages, talents
9. Qualities: imagination, judgement, taste, poise
10. Intelligence quotient

APPENDIX 5



Marquee

APPENDIX 6



Cyclorama

APPENDIX 7

Masks

UNIT II CHAPTER 10

SEQUENCE OF AESTHETIC EXPRESSION SKILLS

SECTION 2: MUSIC

The material presented in this section is viewed by the staff as content generally effective for all children and particularly effective when coupled with appropriate strategies for the emotionally disturbed, behaviorally disordered child.

The piece of the Taxonomy that is applicable to this section's content (Music) has been reproduced below. All the suggested Music activities can be specified in the taxonomic code numbers and language terms of Basic Skill 5, the Subskills of Basic Skill 5 and the appropriate Sequential Levels. *A three-digit code number, 5, a possible code number range of 1-3, a possible code number range of 1-5* designates every item of Music that is described in this section.

THE WHAT OF INSTRUCTION

Basic Skill	Subskills	Sequential Levels
5. Aesthetic Expression	1. Perception	1. Grades 2 and Below
	2. Interpretation	2. Grades 2-4
	3. Creation	3. Grades 4-6
		4. Grades 6 and Above
		5. Ungradable

There are several motives for developing and deploying the skeleton of a music curriculum as part of a reading program for emotionally disturbed-socially maladjusted boys. First, the study of music carries with it relatively little negative emotional charge – that is, children with a history of failure in academic subjects have probably not experienced failure in this area. Another related advantage for implementing a systematic study of music with a disturbed population lies in its lack of association with academic study; most children perceive music as falling into the area of play rather than of work. The therapeutic aspect of music lies partially in the way music allows a translation of the most intense feelings into controllable manipulatable form. Thus, hostile, aggressive, socially nonacceptable feelings may be used in a classroom situation when they are expressed in musical form (for example, in fierce yet controlled drum rhythm). Perhaps the most vital reason for including a chapter on music within a discussion of the implementation of a taxonomy of reading skills lies in the focus of this chapter. Selection of activities for our particular population was made specifically to develop auditory discrimination, acuity, attentivity and retention. Because many of the children have not developed adequate auditory skills, and because these skills are so necessary to reading, we sought to find yet another method for remediation.

Although the staff must be concerned with the personal motivations and intentions of parents and teachers who provide their children with instruction in music, the real object of scrutiny must be the development of a range of response – both intellectual and emotional – in which the student participates while listening, composing or playing an instrument. Such response is predicated on listening discrimination. Although it is most often neglected in initial musical training, response to music can be developed. Because music involves the most highly developed form of auditory discrimination, it involves the fine-tuning of the ear and the expectation that the brain can sort out the admixture of sounds into coherent form.

Because the concept of work and that of leisure are sharply separated, there are two ways in which the study of music is usually perceived. This distinction of perception is predicated on many factors; on socio-economic level and cultural background to name just two. On the one hand, music is considered an extra-curricular, recreational or leisure activity (it is this perception which is relevant to the population). On the other hand, music is conceived of as part of a strict academic regime with all the accoutrements of test and grade level, achievement records, diagnosis and prognosis of future ability. Some children receive private lessons and carefully sequenced, sustained study in ear training, classical theory and harmony. Simultaneously, these children learn the techniques of one or more instruments with appropriate repertoire. They are supplied with a well-made instrument giving clear sound and accurate pitch. They are encouraged to practice, to give performances, to join musical groups. At the other side of the continuum lie those children with whom we are concerned who may have their musical experiences limited to singing in school and perhaps to playing a band instrument. This chapter is interested in providing the classroom teacher of the emotionally disturbed or socially maladjusted child with some ideas which will motivate these children, provide them with a flexible, usable emotional outlet and which will focus the teacher's attention upon the kinds of strategies that develop listening discrimination.

Part of the antipathy many teachers have toward teaching music, the antipathy which causes them to leave all instruction to the school-wide music teacher, perhaps lies in the stereotyped vision teachers have of the nature of music. The stereotype requires the teacher to be intimately familiar with the "great musicians of the past", if not, he counts himself as uninitiated into music – at least serious or 'classical' music. Perhaps what teachers need is a new conception of their task – developing children's response to sound. Because sound is the medium of musical composition, unstructured as well as structured sound has meaning and content. Man may respond to sound as intensely as he can respond to music. For our purposes, we define music as *consciously structured sound*. That basic material – sound – is as malleable as clay or paint, as words or movement. Children can learn to respond to sound by learning to manipulate it, to use it, to handle it, to create it, and to destroy it. They must be taught that sound can be used as a tool, a toy or a game. While structured sound – a Beethoven sonata, for example, can be a source of veneration, to a neophyte it has no more meaning than a random selection of street noises. We might first bring discrimination of unstructured sound (e.g., the noise of machines, weather, animals, and man in his environment) to the conscious level and give children many opportunities to structure sound themselves by allowing them to play around with these sounds, think about them, maneuver them into many different types of settings, use them for many different purposes to express many different types of feelings. So, for example, we might have the children collect the sounds they hear outside school, reproduce them in class, simulate different settings for these sounds, try several simultaneously and discuss which sounds might fit different emotions and so forth. To teach children how to play with sound and use it as they would words to express feelings and ideas is to begin to teach them how to respond to sound that has been organized by someone else and is a vital part of developing the ability to discriminate a range of auditory stimuli.

It is fallacious to believe that it is more difficult to respond to one arrangement of sound – for example, a Bach fugue, than it is to respond to another – e.g., a Strauss waltz. Response is not stereotyped. Who can say what type of music it is easier to respond to? Response should be treated as limitless and unpredictable. It might be useful to avoid programming the sort of listening children are to do.

Many advanced programs in music now require the student to compose. The focus of such composition is changing somewhat from the fashion of the standard schools of music which require their students to compose "in the style of." The progressive orientation to composition is to allow the student total range of style, technique and instrumental combination. What comes about in the first compositions of students who work with this process at almost any level is a groping, atonal, arhythmic style. In the process of such groping, the student begins to develop a unique style and musical identity; he engages in learning the properties, characteristics and behavior of sound. He develops an understanding of the framework that rhythm gives sound; he learns that rhythm, like sound, is not sacred and that it, too, can be used as a tool, a toy, and a game. The teacher can use composition at every level of learning whether or not he has had the same training himself. The classroom teacher who has never composed can have his children compose. The teacher who has not read music can teach his children to read music. Because rhythm and sound are the tools of composition, they are the materials with which the teacher must familiarize himself to help his children compose.

We might begin by exploring briefly the foundations of the rhythmic sense and some ways of developing this sense. Satis Coleman, in a book written in 1922*, and filled with the racial prejudices of the time, still has much to suggest for a program which would develop a musical sense in children. Coleman maintains that the feeling for rhythm must first find expression through the body. At every level it should be stressed that these are not only preschool exercises; the muscles must form habits and the child must learn to feel the sensation of rhythmic movement in his hands and feet.

The ability to listen to a rhythm and duplicate it, to originate steady, rhythmic movements with hands, feet, and head to adjust motion to fit some other steady rhythm and to recognize – to discriminate – a faster and a slower tempo are the foundations of rhythmic work. The following exercises are designed to develop sensitivity in this direction:

1. The teacher taps a rhythm, a child repeats it.
2. The teacher taps a rhythm, the class *in unison* repeats it. Keep the rhythms simple at first. Increase their difficulty slowly.
3. A child taps a rhythm, children repeat.
4. Children are asked to listen to a rhythm they hear on the street or at home, to bring it to class. The other children suggest what it might be.
5. Tap a rhythm "soundlessly" and ask a child or children to reproduce it both aloud and silently.
6. Tap different rhythms with 2 hands. Also use the exercises on the tape program. One exercise which Satis Coleman recommends is as follows:

   A group of children stand with balls in their hands and listen to music which the teacher has selected because it changes tempo at frequent intervals. The plan is to throw the ball up on one beat and catch it on the next and to regulate the distance the ball was thrown according to the time that had elapsed between beats of the music. If the tempo was slow the balls must be thrown very high so they would not return to the hand before the next note was struck. If the tempo was fast, a few inches was as much as the ball had time to go. Each time the tempo changed the children were allowed to pause for one measure to feel the rhythm. If a ball were dropped, or thrown or caught out of rhythm, the owner was temporarily out of the game.

   As an alternate to ball throwing, Coleman suggests using a balloon with music in a similar way. Use of a balloon requires an inhibition of muscular force – and the adjustment of movement to rhythm. The child must learn to adjust his muscles to more delicate movement. Try it in the following manner in time to music with a simple Duple pulse:

   up – catch   up – catch, etc.

   Triple pulse:

   up – bounce – catch, etc.

   Quadruple pulse:

   up – bounce – bounce – catch, etc.

   This is effective with children whose tendency is to "heavy" movement.

Discrimination of Sound

To facilitate discrimination of pitch by increasing the child's power and attention and control over those sounds he himself produces.

1. First have children chant entire sentences in one tone.
2. Progress to chants of two notes by using a tone one step above the main tone. This conversational singing employs the higher note on a word to be emphasized.

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*Coleman, Satis N.,
Creative Music for Children
New York and London:
G. P. Putnam's Sons, 1922

Begin notating sentences with numbers indicating note to be sung.

e.g. How are you feeling today?
1 1 2 2 1 1 1

I finally met your cousin.
1 2 1 1 2 1 2 1

3. Progress to 3 note conversations.

e.g. I saw it begin to rain on my way home.
1 2 1 1 2 1 1 2 3 2 1

He went downstairs to feed the cat.
1 1 2 3 2 1 1 2

DISCRIMINATION OF THE LOUDER OF TWO SOUNDS

A. On this tape you will listen to some sounds. The sounds will come in pairs. You are to tell which one of the two sounds is louder. Let's do Letter A together. If the first sound you hear is louder, circle #1. If the second sound you hear is louder, circle #2. Make sure you listen for the louder sound. Are you ready?

2 piano (same) notes L – S

Did you circle #1? This is the correct answer. The first sound *was* louder.

B. Let's do B together. You will hear 2 sounds. One of the sounds is louder than the other. If the first sound is louder, circle #1. If the second sound is louder circle #2. Ready?

2 piano (same) notes S – L

Did you circle # 2? This is correct. The 2nd sound *was* louder.

Now you will do the rest by yourself. Be sure that you listen for the louder sound. If the first sound is louder circle #1. If the second sound is louder circle #2. All answers will be given at the end of the tape. Are you ready?

C. Letter C. Ready?

2 thumps on wood S – L

D. Letter D. Ready?

2 whistles L – S

E.	Letter E. Ready?		
		2 hums	S – L
F.	Letter F. Ready?		
		2 flute (same notes)	S – L
G.	Letter G. Ready?		
		2 flute	L – S
H.	Letter H. Ready?		
		2 flute	L – S
I.	Letter I. Ready?		
		2 piano	S – L
J.	Letter J. Ready?		
		2 piano	L – S

Here are the answers: Give yourself a check for each correct answer.

Letter C. The louder sound was # _____
Letter D. The louder sound was # _____
Letter E. The louder sound was # _____
Letter F. The louder sound was # _____
Letter G. The louder sound was # _____
Letter H. The louder sound was # _____
Letter I. The louder sound was # _____
Letter J. The louder sound was # _____

If you have 2 or more wrong answers, you should review the exercise on this tape again. The reason for this review is to make sure you are able to hear which sound is louder

This is the end of the recording. Please rewind the tape so that it will be ready to be used again by you or your classmate.

TITLE

Name ________________________ Grade ____________ Date ____________

A	1	2
B	1	2
C	1	2
D	1	2
E	1	2
F	1	2
G	1	2
H	1	2
I	1	2
J	1	2

DISCRIMINATION OF THE SOFTER OF TWO SOUNDS

A. On this tape you will listen to some pairs of sounds. You are to tell which one of the two sounds is softer. Let's do letter A together. If the first sound you hear is softer, circle #1. If the second sound you hear is softer, circle #2. Make sure you listen for the softer sound. Are you ready?

2 piano notes L – S

Did you circle #2? This is the correct answer. The 2nd sound *was* softer.

B. Let's do B together. You will hear 2 sounds. One of the sounds is softer than the other. If the first sound is softer, circle #1. If the second sound is softer circle #2. Ready?

2 piano notes S – L

Did you circle #1? This is correct because the first sound was softer. Now you will do the rest by yourself. Be sure that you listen for the softer sound.

If the first sound is softer, circle #1. If the second sound is softer, circle #2.

All the answers will be given at the end of the tape.

C. Letter C. Ready?

2 thumps on wood S – L

D. Letter D. Ready?

2 whistles L – S

E. Letter E. Ready?

2 hums S – L

F. Letter F. Ready?

2 flute S – L

G. Letter G. Ready?

2 flute L – S

H. Letter H. Ready?

2 piano L – S

I. Letter I. Ready?

2 piano S – L

J. Letter J. Ready?

2 flute L – S

Here are your answers: Give yourself a check for each correct answer.

Letter C. The softer sound was # ____
Letter D. The softer sound was # ____
Letter E. The softer sound was # ____
Letter F. The softer sound was # ____

Letter G. The softer sound was # ____
Letter H. The softer sound was # ____
Letter I. The softer sound was # ____
Letter J. The softer sound was # ____

If you have 2 or more wrong answers, you should review the exercise on this tape again. The reason for this review is to make sure you are able to hear which sound is softer. This is the end of the recording. Please rewind the tape so that it will be ready to be used again by you or your classmate.

MIXED LOUD AND SOFT RECOGNITION

On this tape you will listen to some pairs of sounds. With some pairs you are to tell which sound is louder. With other pairs you are to tell which sound is softer. When I tell you to listen for the softer sound, circle #1 if that is softer or #2 if it is softer. When I tell you to listen for the louder sound, circle #1 if that is louder or #2 if that is louder. Remember to listen to the directions telling you whether to pick the louder or the softer sound. Let's do A together. Ready?

A. Circle the softer sound.

2 thumps on wood L – S

Did you circle #2? This is the correct answer because the second sound was softer than the first.

B. Let's do B together. Circle the louder sound.

2 thumps on wood S – L

Did you circle #2? This is correct because the second sound was louder than the first.

Now do the rest by yourself. Be sure to listen for the directions telling you whether to pick the louder or softer sound. All the answers will be given at the end of the tape. Ready?

C. Letter C. Circle the louder sound.

2 thumps on wood L – S

D. Letter D. Circle the louder sound.

2 flute L – S

E. Letter E. Circle the softer sound.

2 flute S – L

F. Letter F. Circle the louder sound.

2 flute L – S

G. Letter G. Circle the softer sound.

2 piano S – L

H. Letter H. Circle the softer sound.

2 piano S – L

I. Letter I. Circle the louder sound.

2 flute L – S

J. Letter J. Circle the louder sound.

2 flute L – S

Here are your answers. Give yourself a check for each correct answer.

Letter C. The louder sound was # _____
Letter D. The louder sound was # _____
Letter E. The softer sound was # _____
Letter F. The louder sound was # _____
Letter G. The softer sound was # _____
Letter H. The softer sound was # _____
Letter I. The louder sound was # _____
Letter J. The louder sound was # _____

If you have 2 or more wrong answers you should review this tape again. The reason for this review is to make sure you are able to tell the louder or the softer of two sounds.

This is the end of the recording. Please rewind the tape so that it will be ready to be used again by you or your classmate.

DISCRIMINATION OF THE LOUDEST OF THREE SOUNDS

A. On this tape you will listen to some sounds. These sounds will come in sets of three. You are to tell which of the three sounds is loudest. Let's do letter A together. Listen to the three sounds. Pick the loudest sound and circle 1, 2 or 3 on your answer sheet. Make sure you circle the number of the sound which is *loudest*. Are you ready?

3 thumps on wood   pp – mf – ff

Did you circle #3? This is the correct answer because the third sound you heard was the loudest.

B. Let's do B together. Listen to three sounds. Pick the loudest sound and circle 1, 2 or 3 on your answer sheet. Remember to circle the number of the sound which is loudest.

piano   ff – mf – pp

Did you circle #1? This is the correct answer because the first sound you heard was the loudest.

Now do the rest by yourself. Be sure to circle the number which tells which sound is loudest. All the answers will be given at the end of the tape. Ready?

C. Letter C. Ready?

piano   f – mf – pp

D. Letter D. Ready?

piano   mf – ff – pp

E. Letter E. Ready?

piano   p – mf – ff

F. Letter F. Ready?

piano   f – mf – pp

G. Letter G. Ready?

flute	p – f – ff

H. Letter H. Ready?

flute	p – pp – ff

I. Letter I. Ready?

flute	ff – pp – p

J. Letter J. Ready?

piano	mf – pp – ff

Here are the answers. Give yourself a check for each correct answer.

Letter C. The loudest sound was # ____
Letter D. The loudest sound was # ____
Letter E. The loudest sound was # ____
Letter F. The loudest sound was # ____
Letter G. The loudest sound was # ____
Letter H. The loudest sound was # ____
Letter I. The loudest sound was # ____
Letter J. The loudest sound was # ____

If you have two or more wrong answers you should review this tape again. The reason for this review is to make sure you are able to tell which is the loudest of three sounds.

This is the end of the recording. Please rewind the tape so that it will be ready to be used again by you or your classmate.

Name ______________________ Grade ____________ Date ____________

A.	1	2	3
B.	1	2	3
C.	1	2	3
D.	1	2	3
E.	1	2	3
F.	1	2	3
G.	1	2	3
H.	1	2	3
I.	1	2	3
J.	1	2	3

DISCRIMINATION OF THE SOFTEST OF THREE SOUNDS

On this tape you will listen to some sounds. These sounds will come in sets of three. You are to tell which of the three sounds is softest. Let's do letter A together. Listen to the three sounds. Pick the softest sound and circle 1, 2 or 3 on your answer sheet. Make sure you circle the number of the softest sound you hear. Are you ready?

A. 3 piano p – mf – ff

Did you circle #1? This is the correct answer because the first sound you heard was the softest.

B. Let's do B together. Listen to three sounds. Pick the softest sound and circle 1, 2 or 3 on your answer sheet. Remember to circle the # of the sound which is softest.

piano f – ff – pp

Did you circle #3? This was the correct answer because the third sound you heard was softest.

Now do the rest by yourself. Be sure to circle the number of the softest sound you hear. All the answers will be given at the end of the tape. Are you ready?

C. Letter C. Ready?

piano ff – mf – p

D. Letter D. Ready?

piano mf – f – p

E. Letter E. Ready?

piano pp – mf – ff

F. Letter F. Ready?

piano f – mf – pp

G. Letter G. Ready?

flute pp – mf – ff

H. Letter H. Ready?

flute p – pp – f

I. Letter I. Ready?

flute f – pp – p

J. Letter J. Ready?

flute p – pp – ff

Here are the answers. Give yourself a check for each correct answer.

Letter C. The softest sound was # ____
Letter D. The softest sound was # ____
Letter E. The softest sound was # ____
Letter F. The softest sound was # ____

Letter G. The softest sound was # ____

Letter H. The softest sound was # ____

Letter I. The softest sound was # ____

Letter J. The softest sound was # ____

If you have two or more wrong answers, you should review the exercise on this tape again. The reason for this review is to make sure you are able to hear which sound is louder.

This is the end of the recording. Please rewind the tape so that it will be already to be used again by you or your classmate.

MIXED LOUD AND SOFT RECOGNITION WITH THREE SOUNDS

On this tape you will listen to some sounds. These sounds will be played in groups of three. With some groups you are to tell which sound is loudest. With other groups you are to tell which sound is softest. First listen to the directions telling you whether to pick the loudest or the softest sound you hear. Then pick the number 1, 2 or 3 which tells whether the first, second or third sound you heard was loudest or softest. Let's do A together. Are you ready?

A. Circle the loudest sound.

piano f – mf – p

Did you circle #1? This is correct because the first sound you heard was loudest.

B. Let's do B together. Circle the softest sound.

flute mf – pp – ff

Did you circle #2? That is the correct answer because the second sound you heard was the softest.

Now do the rest by yourself. Be sure you listen to the directions telling you whether to pick the loudest or the softest sound. The answers will be given at the end of the tape. Are you ready?

C. Letter C. Circle the loudest sound. Ready?

piano p – ff – f

D. Letter D. Circle the softest sound. Ready?

flute pp – f – ff

E. Letter E. Circle the softest sound. Ready?

flute ff – pp – f

F. Letter F. Circle the loudest sound. Ready?

piano pp – ff – p

G. Letter G. Circle the softest sound. Ready?

piano ff – f – pp

H. Letter H. Circle the loudest sound. Ready?

flute ff – pp – p

I. Letter I. Circle the loudest sound. Ready?

flute pp – f – ff

J. Letter J. Circle the softest sound. Ready?

piano ff – pp – f

Here are your answers. Give yourself a check for each correct answer.

Letter C. The loudest sound was # _____
Letter D. The softest sound was # _____
Letter E. The softest sound was # _____
Letter F. The loudest sound was # _____
Letter G. The softest sound was # _____
Letter H. The loudest sound was # _____
Letter I. The loudest sound was # _____
Letter J. The softest sound was # _____

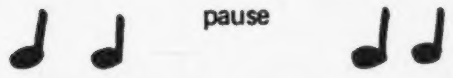
If you have two or more wrong answers you should review this tape again. The reason for this review is to make sure you are able to tell the loudest or the softest of three sounds.

This is the end of the recording. Please rewind the tape so that it will be ready to be used again by you or your classmate.

The next series of exercises will involve the child in recognition of rhythms in sequentially expanded and increasingly complex units.

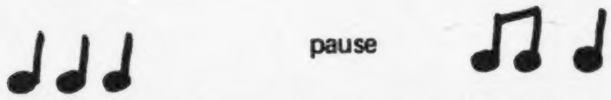
On this tape you will listen to some pairs of rhythms. Sometimes I will repeat the same rhythm twice and sometimes I will play two different rhythms. First I will play one rhythm and pause for a few seconds. Then I will play a second rhythm. If the two rhythms are exactly the same, circle the word that says "same". If they are different, circle the word that says "different". Remember to listen to both rhythms before you mark "same" or "different". Let's do #1 together. Are you ready?

1.



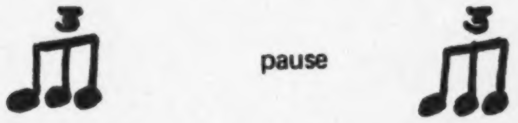
Did you circle "same"? That is the correct answer because both rhythms were the same. Let's do #2 together. Ready?

2.

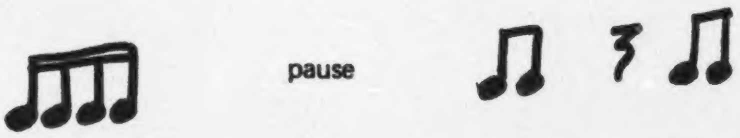


Did you circle "different"? That is the correct answer because I played two different rhythms. Now do the rest by yourself. Remember to listen to both rhythms before you mark "same" or "different". The answers will be given at the end of the tape. Are you ready?

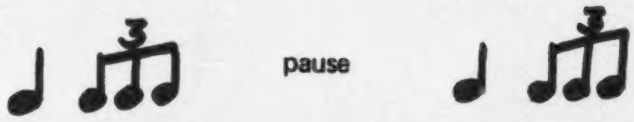
3. Number 3. Ready?



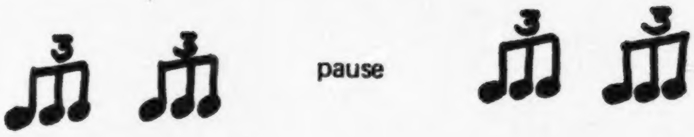
4. Number 4. Ready?



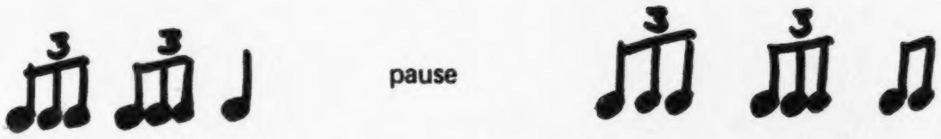
5. Number 5. Ready?



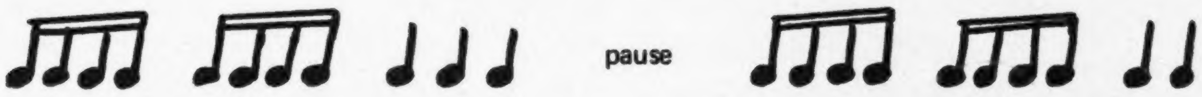
6. Number 6. Ready?



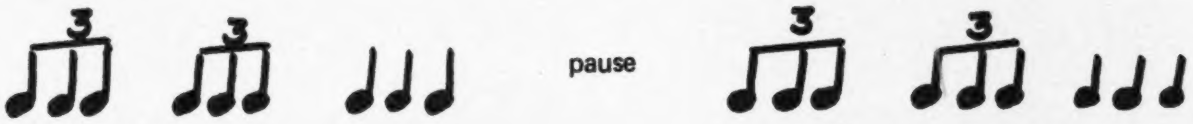
7. Number 7. Ready?



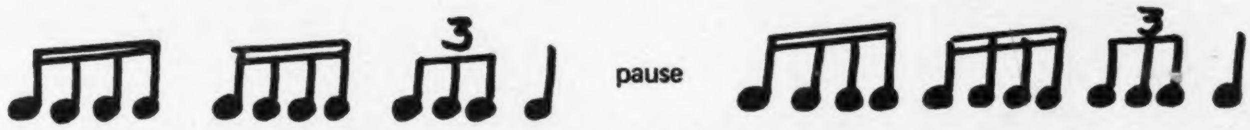
8. Number 8. Ready?



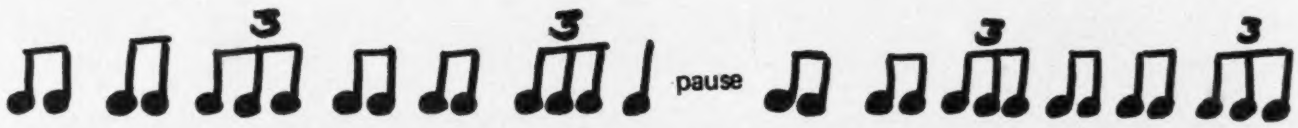
9. Number 9. Ready?



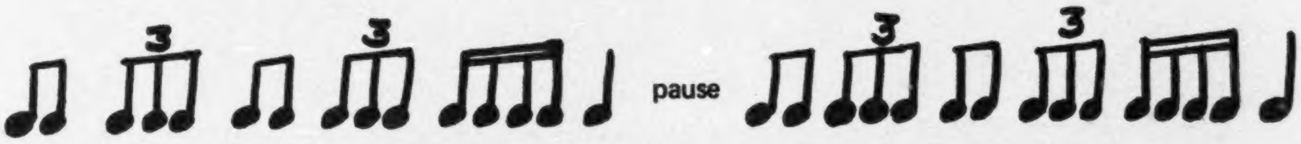
10. Number 10. Ready?



11. Number 11. Ready?



12. Number 12. Ready?



Here are your answers. Give yourself a check for every correct answer.

# 3	The two rhythms were the same.
# 4	The two rhythms were different.

# 5	The two rhythms were the same.
# 6	The two rhythms were the same.
# 7	The two rhythms were different.
# 8	The two rhythms were different.
# 9	The two rhythms were the same.
#10	The two rhythms were the same.
#11	The two rhythms were different.
#12	The two rhythms were the same.

If you have two or more wrong answers you should review this tape again. The reason for this review is to make sure you can tell whether two rhythms are the same or different.

This is the end of the tape. Please rewind the tape so that it will be ready to be used again by you or your classmate.

DISCRIMINATION OF THE HIGHER PITCH OF TWO SOUNDS

These exercises require the child's recognition of intervals.

On this tape you will listen to some sounds. The sounds will be played in pairs. You are to tell which sound is higher in pitch than the other. If the first sound is higher than the second, circle #1 on your answer sheet. If the second sound is higher than the first, circle #2 on your answer sheet. Let's do A together. Ready?

A. Flute 2 octaves F up C

Did you circle #2? That is the correct answer because the first note was higher than the second. Let's do B together. Ready?

B. Flute 2 octaves D down E

Did you circle #1? That is the correct answer because the first note you heard was higher than the second.

Now do the rest by yourself. Remember to listen for the higher of the two sounds. All answers will be given at the end of the tape. Are you ready?

C. Leter C. Ready?

Flute 2 octaves G up F

D. Letter D. Ready?

Flute A down low C

E. Letter E. Ready?

Flute C up G

F. Letter F. Ready?

Flute D up B

G. Letter G. Ready?

Piano C down A 2 octaves

H. Letter H. Ready?

Piano C down A within octave

I. Letter I. Ready?

Piano C up C 1 octave

J. Letter J. Ready?

Piano C down C 1 octave

Here are the answers: Give yourself a check for each correct answer.

Letter C. The higher note was # _____
Letter D. The higher note was # _____
Letter E. The higher note was # _____
Letter F. The higher note was # _____
Letter G. The higher note was # _____
Letter H. The higher note was # _____
Letter I. The higher note was # _____

If you have 2 or more wrong answers, you should review the exercise on this tape again. The reason for this review is to make sure you are able to hear which sound is louder.

This is the end of the recording. Please rewind the tape so that it will be ready to be used again by you or your classmate.

DISCRIMINATION OF THE LOWER OF TWO SOUNDS

On this tape you will listen to some sounds. The sounds will be played in pairs. You are to tell which sound of the two sounds you hear is the lower sound. If the first sound you hear is lower, circle #1 on your answer sheet. If the second sound you hear is lower, circle #2 on your answer sheet. Let's do letter A together. Remember to listen to the lower of the two sounds. Are you ready?

A. Flute F up C

Did you circle #1? This is the correct answer because the first sound you heard was lower than the second.

Let's do letter B. together. Ready?

B. Flute D down E

Did you circle #2? This is the correct answer because the second sound you heard was lower than the second.

Now do the rest by yourself. All answers will be given at the end of the tape. Remember to listen for the lower of the two sounds. Are you ready?

C. Letter C. Ready?

Flute G up F

D. Letter D. Ready?

Flute A down low C

E. Letter E. Ready?

Flute C up G

F. Letter F. Ready?

Flute D up B

G. Letter G. Ready?

Piano C down A 2 octaves

H. Letter H. Ready?

Piano	C down A within octave

I. Letter I. Ready?

Piano	C up C 1 octave

J. Letter J. Ready?

Piano	C down C 1 octave

Here are your answers. Give yourself a check for each correct answer.

Letter C. The lower note was # ____
Letter D. The lower note was # ____
Letter E. The lower note was # ____
Letter F. The lower note was # ____
Letter G. The lower note was # ____
Letter H. The lower note was # ____
Letter I. The lower note was # ____
Letter J. The lower note was # ____

If you have 2 or more wrong answers, you should review the exercise on this tape again. The reason for this review is to make sure you are able to hear which sound is louder.

This is the end of the recording. Please rewind the tape so that it will be ready to be used again by you or your classmate.

DISCRIMINATION OF MIXED HIGH AND LOW SOUNDS

On this tape you will listen to some sounds. The sounds will come in pairs. With some pairs you are to tell which sound is higher. With other pairs you are to tell which sound is lower. When I tell you to listen for the lower sound, circle #1 on your answer sheet if the first sound you hear is lower or #2 if the second sound you hear is lower. When I ask you to listen for the higher sound, circle #1 if the first sound you hear is higher or #2 if the second sound you hear is higher. Let's do letter A together. Remember to listen for the directions telling you whether to pick the higher or lower sound. Ready?

A. Letter A. Pick the lower sound.

Flute	A up D

Did you circle #1? That is the correct answer because the first sound you heard was lower than the second. Let's do letter B together.

B. Ready? Pick the higher sound.

Flute F down C

Did you circle #1? That is the correct answer because the first sound you heard was higher than the second.

Now do the rest by yourself. Remember to listen for the directions telling you whether to pick the higher or the lower sound. All answers will be given at the end of the tape. O.K.?

C. Letter C. Ready? Pick the lower sound.

Piano C down F

D. Letter D. Ready? Pick the lower sound.

Piano A up D

E. Letter E. Ready? Pick the higher sound.

Flute Low C up B

F. Letter F. Ready? Pick the lower sound.

Flute E up A

G. Letter G. Ready? Pick the lower sound.

Flute D up F

H. Letter H. Ready? Pick the higher sound.

Piano G down F

I. Letter I. Ready? Pick the higher sound.

Flute F up F

J.	Letter J. Ready?	Pick the lower sound.	
		Flute	C up D

Here are your answers. Give yourself a check for every one you get right.

Letter C. The lower sound was # _____
Letter D. The lower sound was # _____
Letter E. The higher sound was # _____
Letter F. The lower sound was # _____
Letter G. The lower sound was # _____
Letter H. The higher sound was # _____
Letter I. The higher sound was # _____
Letter J. The lower sound was # _____

If you have 2 or more wrong answers you should review the tape again. The reason for this review is to make sure that you are able to tell which is the higher and which the lower of 2 sounds.

This is the end of the recording. Please rewind the tape, so that it will be ready to be used again by you or your classmates.

*The Creation of Musical Instruments**

1. Use five or six drinking glasses that have musical sounds when struck. Adjust the level of water to correspond to the notes of the major scale. Encourage the children to "tune" the glasses themselves by pouring off the accurate amount of water; the children may then experiment with playing songs by ear, improvising their own. Their original compositions may be written down after they have numbered the glasses. A tune is notated by writing down the consecutive number on the glass that is played. The glass should rest on a thick cloth and be struck with a cloth-covered wooden hammer.

2. A variety of drums can be made from objects readily available. Anything that is cylindrical and hollow makes a barrel drum if the edges are smooth enough to be covered by a skin or cloth or stiff paper. Useful objects for this purpose include:

   a hat box, a round oatmeal box, a coffee can, section of gourds, etc.

   Cover both ends at the same time. A long strong string is drawn first through one skin and then through the other, producing a zig-zag effect around the body of the drum. The cord should be drawn tightly before it is tied. Before applying shellac, if cloth is used, stretch the cloth very tightly over the ends.

   If the skin can be obtained, wet it until it is quite soft before putting it on the drum. After skin has been fastened with cord around the drum, draw it moderately tight and heat it to make it taut and resonant.

   A kettle drum may be made from any concave body which has a smooth edge and which is solid enough to reflect sound: e.g., a chopping bowl, half a coconut shell; flowerpot, etc. Thumbtacks will hold skin or cloth.

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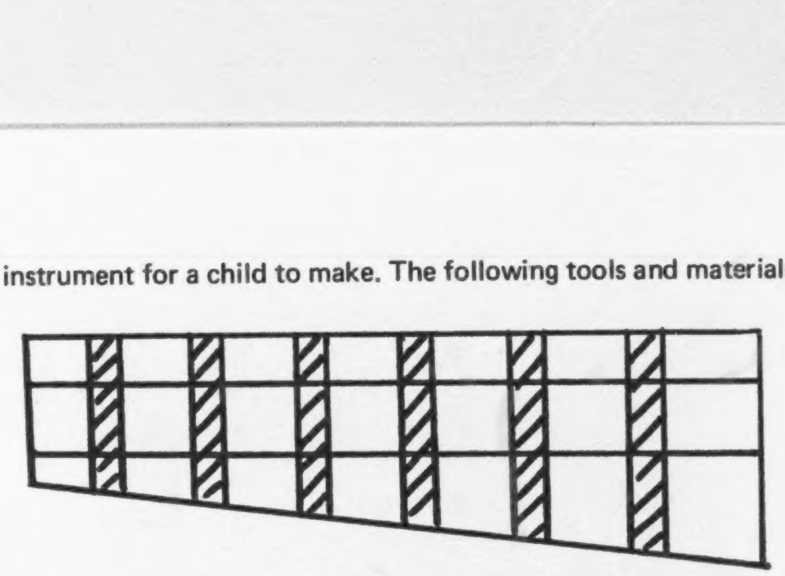
*Coleman, Satis N.,
Creative Music for Children
New York and London:
G. P. Putnum's Sons, 1922

3. A marimba is an interesting and easy instrument for a child to make. The following tools and materials are required:



smooth strips of wood —
  white wood, poplar, pine
saw
plane
nails
strip of thick cloth

A bar of wood about 12-14 inches long, 1½ inches wide, 3/4 of an inch thick is good to start, lift it with 2 fingers about ¼ of its length from one end and strike it in the middle with a wooden stick or mallet. It will give a musical sound which can be easily matched with the voice. This may be used as the keynote of the instrument or its pitch may be changed and brought into unison with another note if some other instrument is to be played with it. If its tone is too low, saw off one end, making the stick shorter. If too high, plane one of the flat sides until the tone is sufficiently lowered. This is an excellent point for experimentation by the child.

Another bar a little shorter (of same width and thickness) may be tuned the same way for the second note of the scale and so on for as many notes as the child wishes for his instrument.

When the notes are all tuned, the child finds a board long and wide enough to use as a base to rest all the notes on, leaving about a half-inch space between every two adjacent ones. Placing the wooden bars flat upon the board produces dead, unmusical tones. Something is stopping the vibrations. A bar of wood vibrates in segments when it is struck. There are points on it where it may rest or be touched without interfering with these vibrations. These points are approximately ¼ of its length for each end and are called nodal points. (The child may locate them by tapping the bar when it is covered with fine sawdust and watching to see where the sawdust collects). If some way can be devised to support the bar at these points only, it will be free to vibrate and produce a clearer tone. Two very narrow strips nailed or glued to the big board will serve this purpose but they must be placed at the proper angle to support the bars at their nodal points. Since the bars are of graduated lengths, the bars with the lowest note being much longer than the bar producing the highest note, the two supporting strips will, of course, have to be placed further apart at one end than at the other. If these supporting strips are covered with felt or other thick cloth, the sound will be better. Can the child see why?

After the nodal points are located and the covered strips are in place, the wooden bars must be fixed in position so they will not bounce out of place when struck. Bore gimlet holes at one end only through the wooden bars at their nodal points, and drive tiny nails into the supporting strip, so that when the bars are in place the nails stand in the gimlet holes and keep the bars from falling off. The nails must not fit tightly in the gimlet holes. Can the child tell why?

4. One of the simplest home-made instruments is the pipes of pan. Alternative materials:

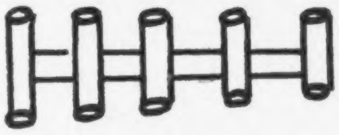
Test tubes
Tall slender bottles
Rolls of stiff paper
Anything that grows with hollow stem

Most children know how to make a sound by blowing across a hollow tube that is closed at one end. Hold the tube straight up, pressing lightly against the chin with the open end of the tube touching the lower lip. Make a small opening in the lips over the pipe, blow across whispering the word "two."

In making this instrument:

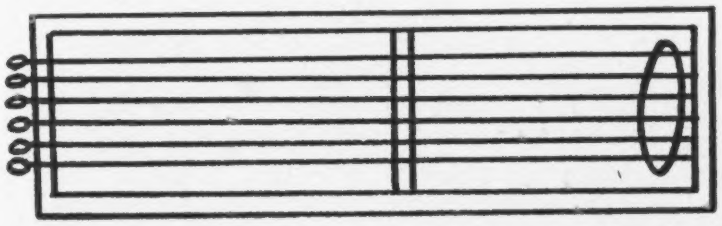
1. The pipes must be closed at the bottom.
2. The pitch of each pipe must be regulated by the length of the hollow part. The longest reed gives the lowest tone (the child should discover this for himself), and the maker must also find by experiment how much to cut off in order to raise the tone to a desired pitch.

In case glass or metal tubes are used, the length of the hollow cavity may be shortened by putting water or sand in them. If rolls of paper are used, the lower ends may be closed with wax, but no leak should remain. The pipes should be tied together in 2 places to hold them straight.



The pipes of pan are the ancestors of the elaborate pipe organs with their manuals, stops, pedals and pipes.

5. A simple stringed instrument-box lyre needed:
    1. Strong frame supporting a number of strings.
    2. Box resonator to intensify the sound of the strings.

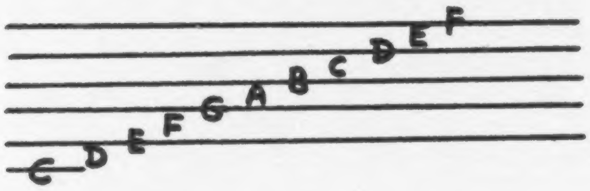


Using a cigar box or a similar box with a top of thin wood, cut a hole in this box. Put the top aside until the frame is in place. A frame of strong wood must be built around the box to support the strings. The side pieces may be as long as the maker desires for length of his strings, the cross pieces must extend fully across both side pieces. Strengthen the joints with long screws so that the pull of many tight strings will not weaken the joints. Bore as many holes in the top cross piece as you will need for strings. Make pegs that fit tightly into these holes and then bore tiny holes through the pegs near the top. These tiny holes are for attaching the strings to the pegs. If the frame is made to fit the box, it may now be glued into place, and the top glued on. Set the box a little back in its frame so that the top of the box lacks about ¼ inch of being level with the frame.

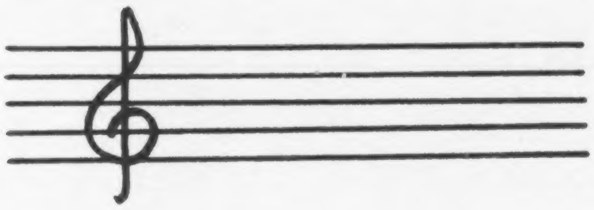
Next, drive small screws or nails into the bottom cross piece, tie the strings to these screws, and then, drawing the strings across the lyre, fasten them to the pegs at the top, and turn the pegs to regulate the tension of the strings. Wire strings, gut or silk strings twisted and dipped into wax might be used. Strings of graduated width, the heaviest used for the lowest notes, are employed.

Do not allow the string to vibrate against the wood.

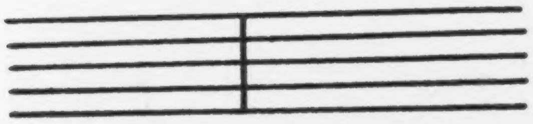
Introducing children of any age to composing can happen simultaneously with introducing them to the basics of reading music. If nothing is known about reading music, the following steps might be taught:



The five lines and four spaces on which music is written is called a staff.



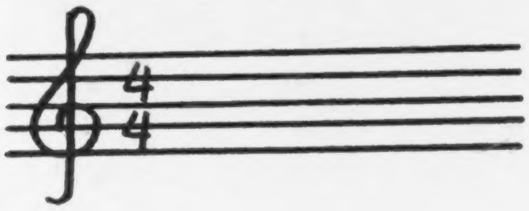
The sign placed at the beginning of the staff is called the treble clef or G clef because it is wound around the line on which the note G is written.



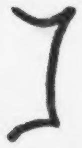
Music is divided by bar lines.

Music written betwen 2 bar lines is called a measure.

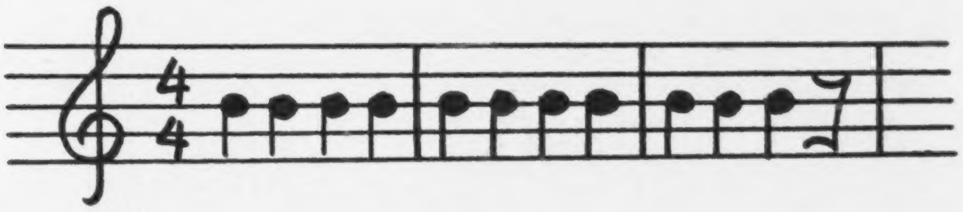
Having the children sing the note 'B' given to them on the piano.



$\frac{4}{4}$ is called a time signature. The top 4 tells us there are 4 counts to a measure. The bottom 4 tells us a quarter note gets one count.



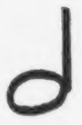
This is called a 'quarter rest.' It means, 'remain silent for the equivalent of one quarter note.'



Have the children clap, sing and perhaps play the above.

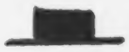
This is a half note.

It gets 2 counts. You play the first count and hold the note for the second.



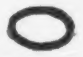
This is a half rest.

Be silent for 2 counts.



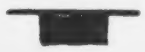
This is a whole note.

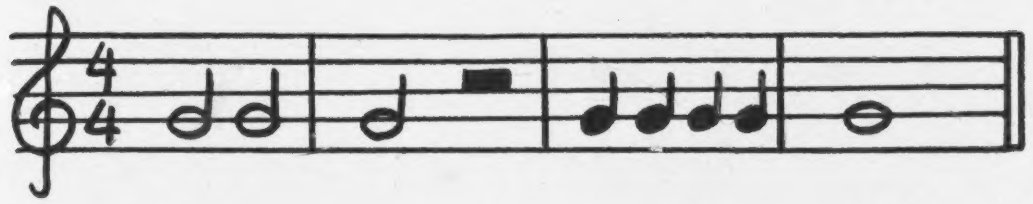
It gets 4 counts



This is a whole rest.

Be silent for 4 counts

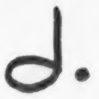




Practice the rhythm of the above. Introduce the note by sounding it on the piano and singing it *and* call its name. Have the children create their own rhythm compositions by making many different measures of 4/4 time with half, whole, quarter notes, and rests. Remind them of the value of the notes. Perhaps, place chart within easy viewing distance as follows:

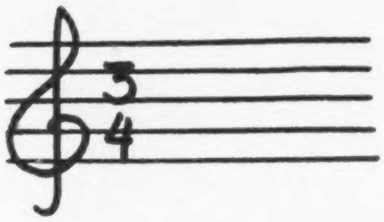
4/4 4 beats to a measure; quarter note gets 1 beat
♩ quarter note = 1 beat
𝅗𝅥 half note = 2 beats
𝅝 whole note = 4 beats

(and the same for the rests)



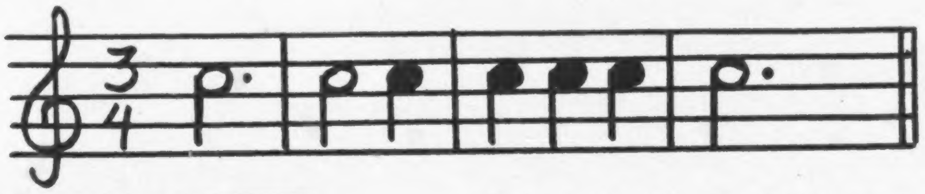
This is a dotted half note.

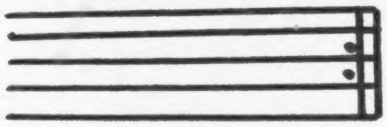
It gets 3 counts.



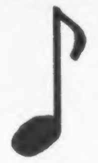
This is another time signature. (Introduce it when you feel sure the children understand the concept of 4/4 time and have had practice creating their own measures in 4/4 time.) The top number tells that there are 3 beats in a measure, the bottom 4 tells us that a quarter note gets one count.

Practice the new note first in 4/4 time; next with the new time signature.

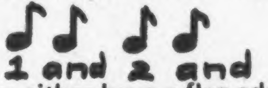




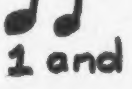
Called a repeat sign, this signals you to go back to the beginning. and play or sing again.



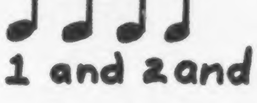
This note is called an eighth note. They are counted.



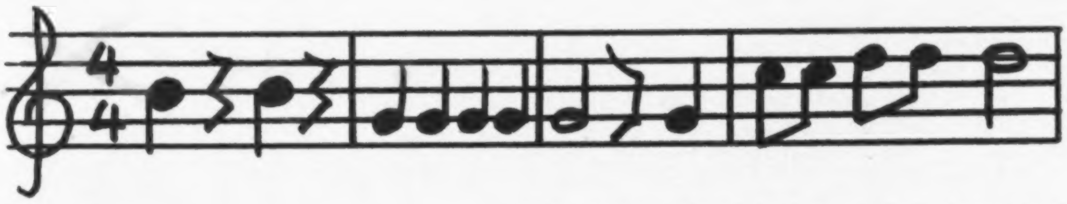
Eighth notes may either have a flag added to their stems ♪♪ or they may be joined by a single line

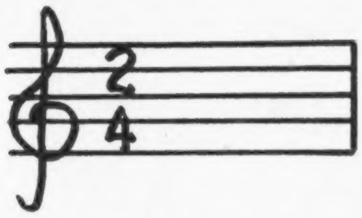


or they may be written

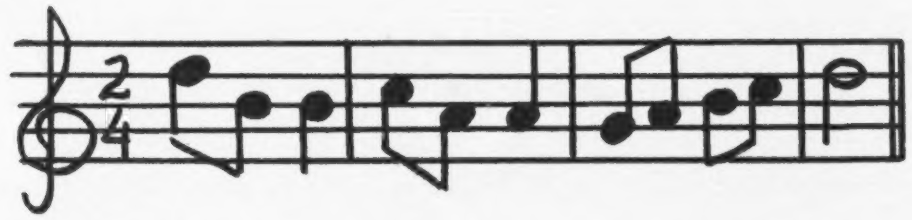


Practice the following rhythms:





The top number of the new time signature tells us there are 2 counts in a measure. The bottom 4 tells us a quarter note gets one count.



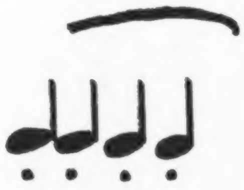
Practice the above for rhythm. Also for the sound of the notes. Have the children make up the measures of rhythm.

Simultaneously with the development of standard rhythm concepts the children must be perceiving that each line and space on the staff represents a sound — a specific note which can be sung, played on the piano or on one of their homemade instruments. The water bottles are a particularly good device for beginning to read the standard notes and their values. Be careful that they are tuned to a standard instrument.

Teach the meaning of the following dynamic marks:

double piano	pp
piano	p
forte	f
double forte	ff
mezzo piano	mp
mezzo forte	mf

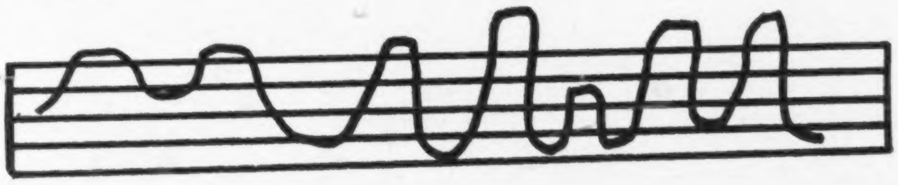
Encourage the children to learn and use types of phrasing.



Beginning to compose should come about very naturally. Composing should be introduced to the children as constructing arrangements of music from some sort of preformed plan.

They might begin by composing rhythm studies, that is, a number of measures of different combinations of 1/4, 1/2 and whole notes and rests in 4/4 time.

Another way to begin is to tell the children to look out the window and draw on the staff the shape of the tops of buildings they see, thusly:



Arrange the notes according to the pattern of the building tops. The rhythm may be borrowed from sheet sounds etc.

Finally the children might improvise on their homemade instruments and have their classmates attempt to notate the composition.

Two references of use to the teacher in developing a vocabulary are *The Harvard Dictionary of Music* * and ~~An~~ *Oxford Companion to Music.* * In addition, the teacher can draw from the suggested exercises and activities included in this Music section a vocabulary that would be useful in teaching reading skills.

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*~~Abel~~ apel, Willi. *Harvard Dictionary of Music.* Cambridge, Mass.: The Belknap Press of Harvard University Press, ~~1944~~ second edition, 1969.
*Scholes, Percy Alfred. ~~An~~ *Oxford Companion to Music.* New York: Oxford University Press, 1956.

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UNIT III

THE TAXONOMIC INSTRUCTION PROJECT WORKSHOP

UNIT III CHAPTER II

THE TAXONOMIC INSTRUCTION PROJECT WORKSHOP

SIMULATED EXPERIENCES AT P.S. 9, MASPETH, QUEENS

The Workshop following is reproduced as it is presented to schools and other audiences by the associate director of the Taxonomic Instruction Project and the project staff. It will be produced as a video-tape at a later date. School systems wishing to present the Workshop as a training project for teachers can use the facsimile drawings as overhead projections to be presented with the script and dialogue. The facsimiles, are listed in the Table of Contents and are arranged in order of presentation following the script of the Workshop.

NARRATOR: Ladies and Gentlemen. Thank you for accepting our invitation to be with us today, and I'm happy to welcome you. Before we begin, I should like to introduce to you Dr. Sandford Reichart, Associate Director of our Taxonomic Instruction Project who was acting director during the year that the project director, Abraham J. Tannenbaum was a visiting professor at Hebrew University in Israel. Dr. Reichart is also the director of the Master of Arts in Teaching Program in Urban Education cooperatively sponsored by the Cleveland Public Schools and John Carroll University. He is a man of boundless energy and wry humour, with a profound interest in and knowledge of underachieving children and the unique ability to evoke a sense of common spirit among the research staff members. The workshop to be presented is the creation of all members of the staff and represents their efforts and ideas. The staff of this reading project has invited you to participate in a workshop for a number of reasons. Foremost among these reasons is their desire to shed the protective cocoon that has encased the project during its developmental stages. After a year of prectical application, they know rather definitively what is successful and what is not with children displaying certain types of emotional disturbances, and they are eager for the opportunity to submit their educational principles to professional scrutiny and evaluation. We are proselytizing, spreading the good news, and the measure of our success will be the extent to which you understand our principles, and the degree to which you will incorporate them into existing programs. But before the flourish of trumpets and the elevation of the curtain, let me provide you with the background that will enable you to see its growth and provide the necessary information for your understanding. The project began three years ago in 1966-1967 with two on the staff, three teachers and seventy-five emotionally disturbed, socially maladjusted boys in a special school in Manhattan.

FACSIMILE OF PROJECT TRANSPARENCY #1 DEFINITION OF EMOTIONAL DISTURBANCE AND SOCIAL MALADJUSTMENT

At the time, our name was the *Self-Instruction Reading Project*, reflecting our purpose. Since the children had previously failed with traditional methods and texts, all books were stored away not to be used. The children were to be guided from total classroom instruction to complete individualized instruction with the motivation being intrinsically based. Not only was our project new, but the school was new in the philosphic sense, although the buildnig was old. This was a school for children not containable in the regular classroom for whom departmentalized curricula was to be provided, and that curricula was to be innovative. Therefore, the staff had as its main purpose the production of original materials, or the modification of commercial ma-

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Fictitious names of students used throughout Unit III, Chapters 11 and 12.

terials. Movement was seen this first year. The teachers of the school did not act in the traditional manner, and the children became more active participants in the learning process. In the second year, 1967-1968 there was an addition of one member to the research staff, and of three members to the school's teaching staff, as well as the inclusion in the project of the rest of the student population. Our goal was magnified. The diagnostic aspects of the program were expanded. The children's strengths and weaknesses had to be identified. Their weaknesses were to be remediated while their strengths were to provide the means by which to teach them. Self-instruction took on a broader meaning. The child was not to be isolated with his learning task; self-instruction could also take place in other groupings. A high degree of motivation was generated, and the teaching staff found their function less custodial and more instructional. The teachers became the providers of resources for learning. Considerable gain was made in reading scores, but our positive feelings about the program could only be intuitive, as there was no control group with which to match our children's gains. In the current year of our existence, 1968-1969 three new members have been added to the research staff, making a total of six, with the seventh member being the researcher who is responsible for the evaluation of our program. The additions have enriched our competencies to include the specialties of Remedial Reading, English as a Second Language, Curriculum and Instruction, Linguistics and Speech Pathology. We have changed our location to Maspeth, Queens, and we are now called the *Taxonomic Instruction Project.* We are no longer dependent on our positive intuitive feelings to assess the effectiveness of our project. There is a research design which is subjecting the project to rigorous examination. Our children are to be compared with other groups who are receiving modified and traditional treatments. We are highly structured in the way we work with the children and the teachers. All this will unfold when the curtain rises for the role simulation which will demonstrate the staff's experience at the new school with the new population. We ask you to imagine yourselves there, as members of the teaching staff meeting members of the research staff, for the purpose of beginning a new project which incorporates the goals of all teachers, but uses different means to attain these goals.

At this point, I would like to interject a description of P.S. 9, a special school in Maspeth, Queens. The staff has been blessed with a school administrator who is both knowledgeable and cooperative. He has eased our way by assisting us in our relationships with the teachers. In addition to this, Mr. Albert Budnick, the school principal, maintains a school environment which provides an almost perfect setting in which to try out innovations. Our appreciation of the school and its administration must be shared by the student body for the school's attendance hits a high of 88% which is unusual in any school, even the "normal" school. And what makes it more unusual is that a student body of approximately 150 children arrive at school in spite of a long and tiring trip. Here is a simulation of the scene that took place in June of 1968 when the project members were introduced to the teachers of P.S. 9. In the actual scene there were the principal, Mr. Budnick, an assistant principal, six members of the teaching staff, and three members of the research staff. We cannot provide such a large cast of actors, so the staff will simulate their own roles, as well as the roles of the teachers. The usual preliminaries that take place in any such meeting will be eliminated. Imagine you are in the library of P.S. 9.

Teacher #1: *Taxonomic Instruction Project!* That's an impressive name, but what does it mean?

Staff Member #1: That's a good lead question. But before I provide a definition as we use it, let's explore a little the use of the word taxonomy in the more traditional sense. In the natural sciences a taxonomy means the classification of plants and animals according to their natural relationships. We use taxonomy in the same broad sense of classifications, but in our field we have used two main divisions in which to subsume the skills and the strategies of teaching reading.

Teacher #2: Can you be more specific?

Staff Member #1: Yes. We have a system of classification which has two main categories, the *What* of Instruction and the *How* of Instruction.

FACSIMILE OF PROJECT TRANSPARENCY #2 OF THE WHAT OF INSTRUCTION

First, I'll explain the *What* of Instruction, as we see it. There are five Basic Skills, many Subskills, and also Sequential Levels which relate to them. By Sequential Levels we mean the child's operational grade level. I would like to emphasize that the skills, subskills and levels that are chosen for each child depend on the results of the testing program which is done at the beginning of the year. That's the first major division of our Taxonomy. Is it a little clearer?

Teacher #2: Somewhat, but the minute you get into taxonomy, it's a difficult concept.

Staff Member #1: All right then. If you look at the transparency, under the title and on the left, you will see the five Basic Skills that we have arbitrarily chosen as the main skills for reading proficiency.

Teacher #1: What do you mean, arbitrarily? Is the project still trial and error?

Staff Member #1: I mean there are other reading skills you could choose that are different from those that we have chosen. However, we have selected the most obvious and pertinent ones.

Teacher #1: Are you then saying I can choose other skills which would be more pertinent for my class in reading?

Staff Member #2: Let me answer that. You're right! The Taxonomy is a completely flexible instrument. Now, if you will look at the middle column, you will see the Subskills that relate to each Basic Skill. And in the right column, are the Sequential Levels which cover the full range of reading ability from the total nonreader to the child who is reading above grade level. The outline projected is the structure of the *What* of Instruction; the ways it gets filled in, the items that are used in planning lessons for the children, depend on the strengths and weaknesses that are revealed in the diagnosis of those children. These skills work best for us. But let me stress again that we feel one of the strengths of the Taxonomy lies in its openness to change and expansion.

Teacher #2: I understand the *What* of Instruction now. It's actually the content you teach, and the level of that content is decided by reading tests.

Staff Member #2: Yes! That's exactly it. But it's only 50% of the total picture. We believe that individualization of reading instruction must have three dimensions.

FACSIMILE OF PROJECT TRANSPARENCY #3 OF CUBED SYMBOL OF CHILD

Some remedial programs center around the *What* of Instruction, or, if you prefer, the content. When we teachers stand up in front of a room and impart information to children, we are assuming that all the children are functioning physiologically, psychologically, socially, and intellectually at pretty much the same level. Not only is this not true, as we all well know, but the individual child functions at different levels in all the areas of learning you see on the transparency. Because the special class setting makes apparent these differences, we have found it necessary to place as much emphasis on the *How* of Instruction as we do on the *What*. That transparency synthesizes our concept of individualization. The individual student is planned for in all three dimensions.

Teacher #1: You are saying what all teachers are aware of. It's much more difficult to apply these ideas when faced with the reality of a classroom. What are your suggestions?

Staff Member #2: That's the *How* of Instruction.

FACSIMILE OF PROJECT TRANSPARENCY #4 THE HOW OF INSTRUCTION

Let's take a look at it. Under the heading are four columns that structure for us the *How* of Instruction. In the first, on the left, under Instructional Method, are seven settings in which the content can be administered. All of them are necessary for the child, but at the beginning, we pick the one unique setting that is unique because the child learns best within it. Let's pass to the second column. The second factor is the Instructional Mode. Experience has shown us that perhaps this is not the best title because when we've tried to explain it, it is necessary to use many words. But up to this point we have not found an appropriate title that would be more self-evident. Let me tell you what we mean by mode. It's the style, the format, in which the material is presented. And each style or format requires a certain type of interaction from the child.

Teacher #3: Can we stop for a moment to talk about format?

Staff Member #1: Sure. What is your question?

Teacher #3: I use *READ* magazine.

Staff Member #2: Yes, we use it, too.

Teacher #3: I use it on Fridays. The kids love it. I use it every Friday as a lesson and I also take out a joke from the last page to put on the blackboard every day, first thing in the morning, as an eye opener. It tests the tone for the rest of the day, hopefully. Is this what you mean by a format?

Staff Member #2: That's a good way of beginning a class, and if you explore with the children what makes a thing funny, that's an example of a format.

Teacher #3: And I notice you have puzzles listed as a mode. I use that too.

Staff Member #2: Crossword puzzles are good in other ways. They provide a good format for teaching word meanings. We rely on them quite heavily. Let's continue to the third column of the *How*.

Teacher #3: Yes. I think I know what you mean by format now.

Staff Member #1: The third factor is Communication Input and this we feel is self-explanatory, except for one thing. All children may not be visually oriented to the the same degree, and you can see that we have other inputs.

Teacher #3: Let's go back to *READ* magazine. Does it use only one Communication Input?

Staff Member #1: Yes, if the child reads it by himself. If somebody else is reading to him, we have an auditory input, and if the child is reading along silently as well, then we have a combination of auditory and visual input.

Teacher #3: Oh, I see what you mean.

Staff Member #1: Is it clearer now?

Teacher #3: Yes.

Teacher #1: No, let's stick with it a little longer. Kinesthetic — what do you mean by that as an input?

FACSIMILE OF PROJECT TRANSPARENCY #5
GLOSSARY DEFINITION OF KINESTHETIC INPUT

Staff Member #1: The sense of movement — the sense of self as a means of learning. For example, suppose the child is having difficulty discriminating between an /ʒ/ sound and a /✓/ sound. Maybe he'll never be able to hear the difference through his ears, but he can manage to learn the difference by the feel of his mouth.

FACSIMILE OF PROJECT TRANSPARENCY #6
OF MOUTH MAKING SOUND OF /ʒ/ AND /✓/

Wepman contrasts these two sounds, as in *clothe* and *clove*. This is the test item that has the highest frequency of failure among the students. Sometimes there is the child with nonfunctioning auditory and visual systems, but a highly functioning kinesthetic system, who doesn't know the sound-symbol association for the alphabet.

FACSIMILE OF PROJECT TRANSPARENCY #7 OF KINESTHETIC CHILD

There he is, no eyes, no ears, all movement. For this child, the movement can be the means of information input, as shown in the next transparency.

FACSIMILE OF PROJECT TRANSPARENCY #8
OF BOY BOUNCING BALL FOR ALPHABET

The sound and the movement of the bouncing ball triggers memory for production of the letters of the alphabet.

Teacher #3: How about *READ* magazine again? Can it be used kinesthetically?

Staff Member #2: Yes. I remember one of the editions had a poetry page. Some of the poetic concepts could be learned through acting out. There was one about walking on new roads and another one about dancing. Both of them were good for Kinesthetic Input. But we prefer a more subtle use of kinesthesis to make the child as conscious of his fine body movements as he is of his gross movements.

Teacher #3: Now it's clear!

Staff Member #2: I think this is a good time to project the transparency we made of the sensorially deprived child. Our artist really captured the point we want to make.

FACSIMILE OF PROJECT TRANSPARENCY #9
OF SENSORIALLY DEPRIVED AND SENSORIALLY INVOLVED CHILD

The top row of figures shows the types of sensory deprivation our children bring to school. The bottom row of figures displays the involved child after he has been trained to use his sensory channels. The next transparency shows our goal of integrating the three sensory input channels using the mathematical concept of set theory.

FACSIMILE OF PROJECT TRANSPARENCY #10 OF SET THEORY

There, each system represented by a circle is discrete, but normal functioning requires the integration of any two and possibly all three of these systems. That black area where all three join represents total integration of sensory input.

Staff Member #1: This brings us to a point I was about to make previously. It was about visual orientation. Most children have a primary modality, one they use for most of the input. For some children it's the visual mode, for some it's the auditory mode, and it's important to determine the child's most functional channel, and to use it to involve him in the learning act – at least at the beginning of remediation.

Teacher #1: You know, I've not thought of it in those terms, but I've seen it in the classroom. Give some children reading material, and they can't stick with it very long. But read a story to those same children, and they are rooted to their chairs. All eyes – no! no! I mean all ears.

Staff Member #1: That's funny because that's exactly the way our artist saw it. Could we have those transparencies projected?

FACSIMILE OF PROJECT TRANSPARENCY #11 OF EARS

You see, in that one he's all ears. That's the equipment he comes to school with. There are no eyes. We mean he's not using his eyes. This is the child who'll sit rooted to the chair when a story is being read, but who can't concentrate on visual material. The middle picture of the same boy, shows the phase at which he's beginning to use his eyes, and in the third phase he's probably an eye-spy.

FACSIMILE OF PROJECT TRANSPARENCY #12 OF CHILD WITH EYES

Staff Member #2: Now, I'll bet you can explain this one to us.

Teacher #2: Okay. That child is strong visually, but has no listening skills. Then, through training, he begins to acquire strength in listening until he becomes the school's best eavesdropper.

FACSIMILE OF PROJECT TRANSPARENCY #12A OF HOW OF INSTRUCTION

Staff Member #1: Well said. Now let's go to the fourth column under the *How* of Instruction. That's the type of response that is expected from the child. The first one, "no response," is really an answer but we just can't see it. The child might be reading for enjoyment, or for recreation.

Teacher #3: Does motoric response mean the kind of kinesthetic thing you suggested for the poems in *READ*?

Staff Member #2: Yes, and it's also a written response. Writing requires the use of less gross muscles. And to use *READ* again, if you develop comprehension questions for some of the selections which require the child to give a written answer, you're using number three of the Communication Output.

Teacher #3: In my class, there's difficulty with the oral and the written response. My children have difficulty with both. When they're required just to put a word in a blank, like the workbook exercises, they do all right; but if they have to string words together, it's murder.

Staff Member #1: We find the same thing.

Teacher #3: Composing a written response is harder for the child than the oral response, but even the oral response is poor.

Staff Member #1: Then that should be the kind of thing that's incorporated in the prescription.

Staff Member #2: What's your general feeling about the Taxonomy, so far?

Teacher #2: It's clear and I can see the effectiveness it would have in making individual lesson plans for children; but the problems of classroom management seem overwhelming. I'd be afraid of losing control of the class.

Staff Member #2: Is this what you mean?

FACSIMILE OF PROJECT TRANSPARENCY #13 OF CHAOTIC CLASSROOM

Teacher #2: That's exactly what I mean, except maybe that class isn't bad enough.

Staff Member #1: We had the same reactions when we heard about the Taxonomic Instruction Project for the first time.

Teacher #2: That's a relief. Most of us feel guilty when we feel negative to innovations that are developed for the benefit of children. And what follows is hostility toward those who plan them. Sometimes the feeling is that these plans are formulated by people who are never confronted by the realities of the classroom, and who have nothing to do with children.

Staff Member #1: We've tried to cope with this problem by beginning individualization at the teacher's readiness level. Most teachers have at least two groups in their classes. Do you?

Teacher #1: Yes, my upper group uses *READ* magazine and my lower group uses *Reader's Digest Skill Builder, Level Four.*

Staff Member #1: Then you're beyond the level on the transparency which shows whole group instructional method?

FACSIMILE OF PROJECT TRANSPARENCY #14 OF WHOLE GROUP

Teacher #1: Yes, in reading, yes. But that's what the class would look like in other subjects, except they're behaving too well.

Staff Member #1: Then you've reached the two-group level that's shown on the next transparency?

FACSIMILE OF PROJECT TRANSPARENCY #15 OF PARTIAL INDIVIDUALIZATION

Teacher #2: What are you doing with those groups?

Teacher #1: Well, of course, the numbers don't match mine. I have a much larger class than that. But, forgetting that, the group in the circle, let's say, is reading *Reader's Digest*, and the children at their desks are doing assignments from a phonic workbook, or maybe, some questions that I prepared based on a selection from *READ*.

Staff Member #2: I'm curious. Do you sit down when you read with the group? It looks like you're walking there.

Teacher #1: To answer the first part, I usually do sit. But that's a very realistic picture. And one of those children is asking a question about the assignment. I'm walking over there to help him. The first group has been told to read silently.

Staff Member #2: Then you have more groups than you think you have. And you're at a higher stage of readiness than you think you are.

FACSIMILE OF PROJECT TRANSPARENCY #16
OF THE HOW OF INSTRUCTION

If we go back to the Taxonomy what you have under Instructional Method is number two Teacher-small group, for those children in the circle; number seven, Individual self-instruction for those children at their desks; and as soon as you walk over to help that child whose hand is raised, you have number three, Teacher-student.

Staff Member #1: You even have various Instructional Modes. For the children at their desks it could be number 4, Test-Response; possibly number 6, Programmed Response; or maybe even number 7, Problem-Solving. It depends on the kind of question you've asked them. And the same thing can hold true for the group in the circle.

Teacher #1: And I'm using different Communication Inputs and Outputs, right?

Staff Member #2: You sure are! The children at the desks are using a visual input and a motoric output. The children in the circle have an integrated visual-auditory input, and are using an oral output. In the course of the lesson, input and output are dynamic. When you assist the child, his input is your voice, and his output is probably oral.

Teacher #1: I'm more advanced than I think I am.

Staff Member #1: I think most teachers are. The Taxonomy provides you with a means of analysis so that you can be conscious of what you are doing. And once you're conscious of this, and see how complex the organization of your classroom is, you're ready to go on to more individualization.

FACSIMILE OF PROJECT TRANSPARENCY #17
OF COMPLETELY INDIVIDUALIZED CLASSROOM

Teacher #1: I'm convinced. That looks great! And I can see it being done with seven children as you have in your transparency; but what about fifteen children which is the legal register for this type of classroom.

Staff Member #2: That's your readiness level. Together, in conference, you and I will explore what things we do with seven children in your classroom, the seven that you pick. And after that, we'll continue to individualize at the rate you wish to go. Complete individualization will come about faster than you think. Like most teachers, you are unaware of your resourcefulness.

Staff Member #1: Let's not leave everyone with the idea that a completely individualized class is the final goal. We know it isn't – it's the means to bring out the child's greatest potential. But we know he must work with other people in this world and, therefore, we put him through all the instructional methods, always coming back full cycle to total group instruction.

FACSIMILE OF PROJECT TRANSPARENCY #18 OF TOTAL GROUP

Teacher #3: That pleases me. After all, when our children leave this school, that's what they'll meet up with in the regular classroom. We must expose them to future conditions.

Staff Member #2: That's what we call "personalizing" instruction. It's the next step after individualization, which provides exposure not only to all instructional methods, but to all the Instructional Modes, Communication Inputs, Outputs and combinations thereof, in which he must develop competencies.

FACSIMILE OF PROJECT DEFINITION #19 OF PERSONALIZED INSTRUCTION

Teacher #3: That's realistic. The children love this school. It's small and everyone knows each child and his needs. It's almost womb-like, and I worry about the kids when they leave here, and enter larger and more impersonalized school settings. We must expose them to things they'll meet up with.

NARRATOR: The *Taxonomic Instruction Project*, was launched as an educational concept with emphasis on inspiring and helping teachers to use their own resources and talents in a more versatile way. It was a good beginning. The staff perceived its role as one of providing the teacher with maximum training, insights, demonstrations and reinforcements; the teachers perceived the project as an educational pharmacy and the staff as dispensers of educational prescriptions.

FACSIMILE OF PROJECT TRANSPARENCY #20 OF PHARMACY

NARRATOR: There we are as the educational pharmacy. Our resource room is like a *Special Education Instructional Materials Center*, where we have accumulated a reservoir of materials. These commercial, modified, and original materials have been catalogued according to the first three numbers of the Taxonomy to provide both an inventory and a quick retrieval method. On the Catalogue Cards there has been included a listing of how each particular piece of material can be presented. It includes, also, numbers for Instructional Method, Instructional Mode, Communication Input and Communication Output, in order to pinpoint the strategies to which each piece of material best lends itself. Many of our materials have been field tested and we can attest to their effectiveness.

FACSIMILE OF PROJECT TRANSPARENCY #21 OF CATALOGUE CARD

FACSIMILE OF PROJECT TRANSPARENCY #22 OF STRATEGY

Through the training that was to follow, it was our hope that the teachers would become so skilled in the taxonomic concepts that they could independently use the catalogue for content and strategies. The teachers' concept of the project as an educational pharmacy is a good nutshell analogy, but it is narrow in scope. In order to broaden the concept to include all the facets of the project, meetings were scheduled regularly for the refinement of these important issues: What is the project? What are its goals? To what degree do we understand the project? How do we implement it? How can we evaluate its effectiveness? Through Mr. Budnick's guidance and administrative talents, problems of external intervention were minimized, and the research staff was incorporated into the school organization as an integral part of a teaching team. The teachers themselves fulfilled their commitments. They granted the research staff complete access to their classrooms, provided total contact with the children and met conscientiously with the staff for that essential mutual interaction which was necessary to individualize instruction for each child. At this point, I would like to introduce the eight steps of our procedure for implementing the concepts of the project. It will provide both an overview of the project and a knowledge of the order in which the steps proceed.

FACSIMILE OF PROJECT TRANSPARENCY #23 OF EIGHT STEPS OF PROJECT

I'm not going to read these eight steps to you. Instead, each step will be illustrated on the video-tape which we have prepared to simulate the procedures as they actually occurred. The transparency will remain on view to enable you to focus on the related step. The video starts with IDENTIFICATION OF THE PROBLEM. In this part of our presentation, the scene opens with a staff member administering tests to the children in a small testing room at P. S. 9. The first one, a group test, is one that is diagnostic of the children's ability to discriminate consonant sounds in an initial position within syllables.

FACSIMILE OF PROJECT TRANSPARENCY #24 OF DIAGNOSTIC TEST
(VIDEO SCENE OF DIAGNOSTIC TESTING)

Staff Member: I am going to give you a word. I want you to listen very carefully to the first sound of that word – then you are going to look at three nonsense syllables – none of them is going to spell anything. The first word I'm going to give you is "water." Now we'll do this one together. The initial sound in water is "wuh," so when you look at "ral," "hink," and "weh," which one would you choose?

Child One: Weh.

Staff Member: That's correct! Now listen carefully and circle the correct syllable. You will do the rest by yourselves. The second one is . . . . (the staff member walks around)

NARRATOR: The second part of the test is much like the first, except that the child listens for the final sound.

Staff Member: All right, in the other test you had to listen to the first sound – now you are going to listen to the last sound. The word I'm going to say is "big" – which word would you choose that has the same last sound as "big?"

Child Two: I'd circle number one.

Staff Member: Good! Listen carefully and circle the correct syllable. You will do the rest by yourselves. The second one is . . . .

NARRATOR: Only the first two parts of our diagnostic are administered in a group setting. The rest of the test is given individually. You now see the staff member giving the diagnostic to one child.

FACSIMILE OF PROJECT TRANSPARENCY #25 OF DIAGNOSTIC TEST

Staff Member: All right, I am going to point to different letters and I want you to give me the names of the letters. (Points)

Child One: D.

Staff Member: Yes, and what is this one?

Child One: L.

Staff Member: Good!

NARRATOR: The staff feels that a sound must be associated with each consonant symbol. That is what you are seeing as the staff member continues the test.

Staff Member: You know the names of these letters. Now, what is the sound of the first one?

Child One: Duh.

Staff Member: Good! And the second one?

Child One: ll – lll – lix.

NARRATOR: The same ability is considered necessary for the vowels. In this section. you see the staff member asking the child to give the names of the vowels and their long and short sounds.

Staff Member: Can you give me the names of these five letters?

Child One: A – E – O – I – U

Staff Member: Now give me the short sounds of these letters.

Child One: A – I – O – U – U

Staff Member: How about the long sounds?

Child One: A – E – I – O – U

Staff Member: All right.

NARRATOR: The next item of the diagnostic test requires the child to sound the consonant blends and digraphs.

Staff Member: Look at these two letters. Can you give me the sound they make together?

Child One: Stuh.

Staff Member: Now this one.

Child One: Chicken.

Staff Member: Okay.

FACSIMILE OF PROJECT TRANSPARENCY #26 COMPOSITE OF DIAGNOSTIC TEST

NARRATOR: There are five more sections to our diagnostic. All of these sections, administered on an individual basis require the child to know the application of the rule of final e, the sounds of vowel combinations, and the rules of syllabication. One other section, administered either in groups or individually, and preferably individually, tests the child's ability to reproduce the letters of the alphabet, both in upper case and lower case. We prefer individual administration in order to see how the child forms the letters of the alphabet. The child's performance can reveal visual-perceptual disturbances if any exist. The next measurement, obtained individually, is one of auditory discrimination. It was designed by Wepman to measure the child's ability to discriminate auditually words that are similar or dissimilar.

FACSIMILE OF PROJECT TRANSPARENCY #27 OF WEPMAN TEST, FORM I, SUGGESTED FOR THIS FACSIMILE

Staff Member: All right now. I'm going to say two words to you and I want you to tell me whether they are the same or different. The first pair of words I will say is "man – man."

Child: Same.

Staff Member: "Pass – path."

Child: Different.

Staff Member: "Clothe -- clove."

Child: Same.

Staff Member: All right.

NARRATOR: And finally there was a standardized test in reading,

FACSIMILE OF PROJECT TRANSPARENCY #28 OF GATES-MACGINITIE COVER SHEET

FACSIMILE OF PROJECT TRANSPARENCY #29 OF VOCABULARY COMPOSITE

the Gates-MacGinitie which gives both vocabulary and comprehension grade scores. The transparency being projected is a composite of the vocabulary section of the test. The test contains 48 items of increasing difficulty. Listen to the staff member administering the test.

Staff Member: Now listen carefully. Do you see the pictures and words on my booklet? They are just like the ones on the cover of your booklet. Right here. The first picture is a picture of a store. Next to this picture are four words. Point to them on your own copy. One of these four words goes best with the picture. I will read the words across, you point to each word as I read it: *"sleep, only, store, water."* Which word to you think belongs with the picture? (The staff member walks around the room checking the answers.)

NARRATOR: The staff member demonstrates the next item, after which the children continue on their own. Let's listen to the staff member.

Staff Member: Now leave your booklets closed and look at my booklet, please. On the inside of the booklet are some more pictures and words. You are to look at the first picture and then draw a circle around the word for that picture. Then do the next one below it. Then the next one, and on down. If you finish all the pictures and words on all three pages, go back and check your work. Now remember, there is only one correct word for each picture. As soon as you finish one picture and word, go on to the next. Do as many as you can, but don't worry if you don't know all the words. Do the best you can. Any questions? Do you understand? All right. Open your booklets and begin.

NARRATOR: Fifteen minutes are allowed for this section and then a similar demonstration is given for the comprehension test. Twenty-five minutes is allowed for its completion. There on the screen is a composite of the comprehension items.

FACSIMILE OF PROJECT TRANSPARENCY #30 OF COMPREHENSION COMPOSITE

A brief look will show you that some of the questions are culturally loaded and others are ambiguous, but the Gates-MacGinitie tests have some technical advantages that other tests do not have, and they provide the team with a floor, the student's achievement level, from which to start instruction. The last instrument in our battery of tests measures the child's ability to recall the 220 most frequently used words of the Dolch list.

FACSIMILE OF PROJECT TRANSPARENCY #31 DOLCH 220 WORD TEST, PAGE 1, SUGGESTED FOR THIS FACSIMILE

This instrument was not used this year because of the time limitation imposed by the strike. We do intend to use it next year because rapid retrieval of these words is necessary for reading proficiency, and the phonically regular items on this list can be used in the instruction of other phonic skills. So much for the diagnostic tests – a little bit of time out of a teacher's life and a child's classroom day. But the results of the tests have much significance for the teacher, the child, and the staff member. In the following episodes, you will see a simulation of the conferences during which the teacher and the staff member analyze the test results for the identification of class problems, small group problems, and individual child problems. The initial emphasis is on the range of skills displayed by the children on the tests.

Teacher #1: How did they do?

Staff Member #1: On the Gates vocabulary, there is a range from no score to 4.8, and on the comprehension, there is a wide range also – but less wide – from no score to 3.5. The children scoring high on the vocabulary did not score as high on the comprehension. This happens frequently. But the differential between the two tests is not usually as large as thirteen months. It tells us something though. We need to give your children much training in word meanings.

Teacher #1: Yes, that's right. Even when I ask for a definition to be given orally, the answers are poor. That's a wide range of achievement. I didn't think it was that large. I'm beginning to feel that I've short changed the children at the upper and lower extremes, and only those in the middle are benefitting from my lessons. It was Andy who scored the no score and Howard who scored the highest, right?

Staff Member #1: Yes. Don't feel bad, though. Most of your children do cluster in the middle, and with individualization, we'll get to the high and low ones too. We would like to retest the children who scored within a year of the test's ceiling on either or both parts, using the next form which has a higher ceiling. If we don't do this, and the child makes much progress, we won't be able to measure the extent of his progress. He'll score beyond the ceiling of the test.

FACSIMILE OF PROJECT TRANSPARENCY #32 – RANGE OF ABILITY, COMMON DISABILITY

NARRATOR: This is a slice of the dialogue that took place between the fifth grade teacher of P.S. 9 and one of our staff members. There are two points of emphasis to be noted: the range of scores, and the recognition of a common disability, which in this case was a deficiency in meaningful vocabulary. Another such dialogue took place between an eighth grade teacher and a staff member. This team has completed the analysis of the silent reading tests, and the results of the Wepman are being discussed.

Staff Member #2: You watched some of your students taking the Wepman Test.

Teacher #2: Yes. I was curious and came in to watch. The few I saw didn't do well. I wasn't too surprised, though, because their speech is so poor.

Staff Member #2: Some of your children perform as if they are deaf. I think it's a functional deafness rather than an organic one. But we'll have to check out by referring these children for hearing tests.

Teacher #2: What is functional deafness?

Staff Member #2: It means there's nothing physiologically or neurologically wrong with his auditory channel. The stimulus gets in. But his deaf-like performance is due to a lack of auditory experiences. The child has an inadequate background from which to develop auditory perceptions.

Teacher #2: Yes, I can see that may apply to many of my children. They get exposed to lots of experiences, but not necessarily the right kind.

Staff Member #2: All the children in your class do not function at this low level. There's a wide range of results in the Wepman. The most common disability is poor awareness of final consonant sounds.

FACSIMILE OF PROJECT TRANSPARENCY #33 – RANGE OF ABILITY, COMMON DISABILITY

NARRATOR: Again, range crops up in the discussion. We may hear it again in the following dialogue between the seventh grade teacher and the staff member.

Teacher #1: The class profile shows that all the children need training in consonant digraphs, short vowel sounds and vowel diphthongs. But we can't plug in Edward, Andy, William, or Enrico at this level. They don't know all of the single consonant sounds, in fact, Andy doesn't know any.

Staff Member #2: They don't know the alphabet. They can't recite it and they can't reproduce it graphically.

NARRATOR: We didn't actually hear the word "range," but that was the essence of that dialogue. Are you very conscious of that word? If you are, we have succeeded, for this word focuses on the

FACSIMILE OF PROJECT TRANSPARENCY #34 OF WORD RANGE – BRIGHT AND PSYCHEDELIC

necessity for individualization of instruction. At the start, the team zeroed in on individualization of content. After the teacher was able to manipualte this with ease, the last four taxonomic numbers were coupled with the content. These four numbers in project language are the *HOW* of the Taxonomy, or strategies.

FACSIMILE OF PROJECT TRANSPARENCY #35 DEFINITION OF STRATEGY

VIDEO SCENE OF A STAFF MEMBER/TEACHER CONFERENCE

A teacher and a staff member are discussing a boy in the eighth grade, George. The content has been chosen. George, a fairly proficient reader, needs training in syllabication. Now the strategy is being prescribed.

Teacher: George doesn't get along with any of the boys in the class. We can let him work by himself, or I can try to find the time to work with him for a little while at least.

Staff Member: He'd love the attention that a teacher-student setting would give, but would you mind if I worked with George? It would make it easier for you, and I'd have the opportunity to field test the effectiveness of a game format with such a child.

Teacher: Of course. That would be fine. What game are you going to use?

Staff Member: *Syllable Count.*

Teacher: I'm not so sure of that one. It may be too competitive for him. Or are you going to let him win?

NARRATOR: The staff member is field testing a game format in a teacher-student setting with George, who is very defensive with his peers. The content could have been presented in another format using an individualized self-instruction setting. The staff member and teacher are reluctant to use this strategy, for they know

that George can function on his own with material at his own level of difficulty. But the object is to provide George with successful experience using a strategy that will ultimately lead him into an interaction with his peers. Let's watch as the staff member plays *Syllable Count* with George. Later, the staff member and the teacher will evaluate George's reaction to this type of strategy.

VIDEO SCENE OF *SYLLABLE COUNT* AND GAME EVALUATION

Teacher:	George did better than I expected. Did you let him win?
Staff Member:	I didn't have to. Most of the time he was successful. And when he wasn't, he didn't get upset.
Teacher:	That may indicate that he's defensive even with you. You should play with him a few more times before we decide whether to move him into a group.
Staff Member:	I think so too.

NARRATOR: And this was what was done. George and the staff member played *Syllable Count* a number of times. George became more adept in this skill, and he began to interact with the staff member in a more normal manner. Once he became so angry that he walked away from the table, but in a few minutes he was back, ready to continue the game. After that incident, he never let his anger get the best of him. He obviously enjoyed playing with someone else, but it may be that the someone else has to be this particular staff member. The teacher and staff member made George the subject of one of their regular conferences. They decided to move him into a peer setting using the competitive game as the Instructional Mode. Leonard was chosen to work with George. His skills and reading proficiency matched George's, while the emotional needs of the two boys seemed to be complimentary. All that remained was to find the right way to bring the boys together. It just came about one morning without any planning. George was late; the staff member was playing *Syllable Count* with Leonard. When George arrived, she casually suggested that he join in the game. He agreed. After a few rounds, the staff member purposefully remembered something that needed to be done in the Resource room, and the two boys were left to play without supervision. The teacher observed from a distance. All went well. There were skirmishes that didn't require intervention. The teacher continued to schedule opportunities for the two boys to work together. He limited these opportunities to a Student-student instructional setting, while he varied in a systematic manner the Instructional Mode, the Communication Input and Communication Output. George and Leonard worked as well in one situation as in another. They were a good Student-student team. Finally, another boy was added to make a Student-small group setting. Here is a video-tape of the boys in action. It is unfortunate that we cannot show you the George of before. the three boys have been assigned some word meaning exercises in *Barnell Loft's Book C.* The exercises have a level of difficulty a little above the boy's independence level, but well below their frustration level. Now the tape.

VIDEO TAPE OF GEORGE IN STUDENT-SMALL GROUP SETTING USING WORD MEANING EXERCISES FROM BARNELL LOFT, BOOK C

We intended the course of the Workshop to follow the neat sequence of the eight procedural steps as outlined on the

FACSIMILE OF PROJECT TRANSPARENCY #36 OF EIGHT STEPS OF PROJECT

transparency. But children have a talent for disrupting neat sequences, and George did just that to ours. For George, the transition from individualization of instruction to personalization of instruction was so rapid that the teacher and staff member were able to omit steps five and six. They had to do so in order to keep pace with George's development. The procedures of REFINEMENT and EXAMINATION will certainly be applied in evolving other strategies for George. To illustrate steps five and six, we are going to use our experiences with two other students. For step five, we have a special child, Henry, an eighth grade boy. His initial profile shows no reading strengths other than a sight vocabulary of five words. But Henry has personal strengths – dignity and integrity. And drawing upon these his tutor, a member of the project staff, began instruction. She reasoned that Henry's visual-sensory system was nonfunctional, otherwise he would have stored more than five words in his eight years of school. A phonic approach seemed imperative for Henry's development, but before he could be exposed to this approach, which requires sound-to-symbol associations, he had to learn the alphabet, to recite it in sequence, and to reproduce the symbols both in order and randomly, upon request. The strategic components being used in the forthcoming video scene are a Teacher-student setting, a Test-Response mode, a Multisensory Input and an Oral-Motoric Output. The video tape now demonstrates the use of this strategy to help Henry to learn to recite the alphabet and an extension of the same strategy to teach a sight vocabulary.

VIDEO TAPE OF HENRY RECITING THE ALPHABET WHILE BOUNCING A BALL, AND ANGEL LEARNING TO STORE AND RECALL WORDS WHILE BOUNCING A BALL

This is a hard way to learn, but you saw how effective it is for Henry. It is a minor achievement, but he has learned to recite the alphabet after eight years of school and his sight vocabulary contains fifteen new words. His tutor has refined her initial description of Henry. On his Profile, there is now noted Henry's first demonstrable strength, the ability to internalize information through kinesthesis. Next, Andy will help us illustrate the sixth step. Andy and Henry are very similar. Andy, too, had no strengths upon which to build, with one important exception – a high degree of motivation. Fortunately Andy, is a fifth grader, so there is still time to do step six – to search through the reservoir of content and strategies for a "goodness of fit." The fifth grade teacher and a staff member made the search together, and they selected for Andy the following strategic components: Teacher-small group setting, because Andy works well with other children; a Test-Response Mode with immediate reinforcement; an Auditory Input and Motoric Output. The content was Language Analysis – single consonant sounds in an initial position at a second grade level of difficulty. The staff members have produced a large number of tapes in which the task for the child is to discriminate between two phonemically significant sounds, for example, / b / contrasted with / d /. The video tape shows the planned strategy as it was used for the three boys.

VIDEO TAPE SHOWING ANDY, ARTHUR AND ENRICO WITH EAR PHONES AND TAPE RECORDER

I wish we could say that this strategy was effective, but in this case the contrary was true. All the children in the group began to display a deterioration of auditory discrimination, particularly Andy. The teacher and staff member had to search further for the "goodness of fit" for these children. They found it. The teacher suggested to the staff member that the children were not ready for this level of auditory discrimination. As a trial, the staff member developed one tape in which the task was to discriminate between two very dissimilar sounds, as / b / with / m /. The problem was discussed with an expert in the education of deaf children, who confirmed the teacher's idea. That tape was tried and the children had a most successful experience. The children have subsequently been exposed to additional tapes and there is no sign of deterioration; the "goodness of fit" has been found. Consequently, a new taping program is in the process of being produced.

We are almost at the end of our presentation. Our project is also drawing to a close for the 1968-1969 year. We are now administering the eighth step, POST-TESTING, using alternate forms in all measurements except for the Diagnostic, which has no alternate form. A comparison of the pre- and post-test results will provide us with a measurement of progress. We'll adjourn now for lunch. In the cafeteria, an area has been roped off for your convenience. Mingle with each other, have a good lunch and give some thought to our project for we will be meeting again (in an hour) and we know your questions will generate a stimulating discussion.

An emotionally disturbed or socially maladjusted child: that child who, for behavioral reasons, cannot be contained with even minimal instruction in a "normal" classroom. Such children are descriptively categorized in terms of exhibited classroom behavior rather than by pathological labeling.

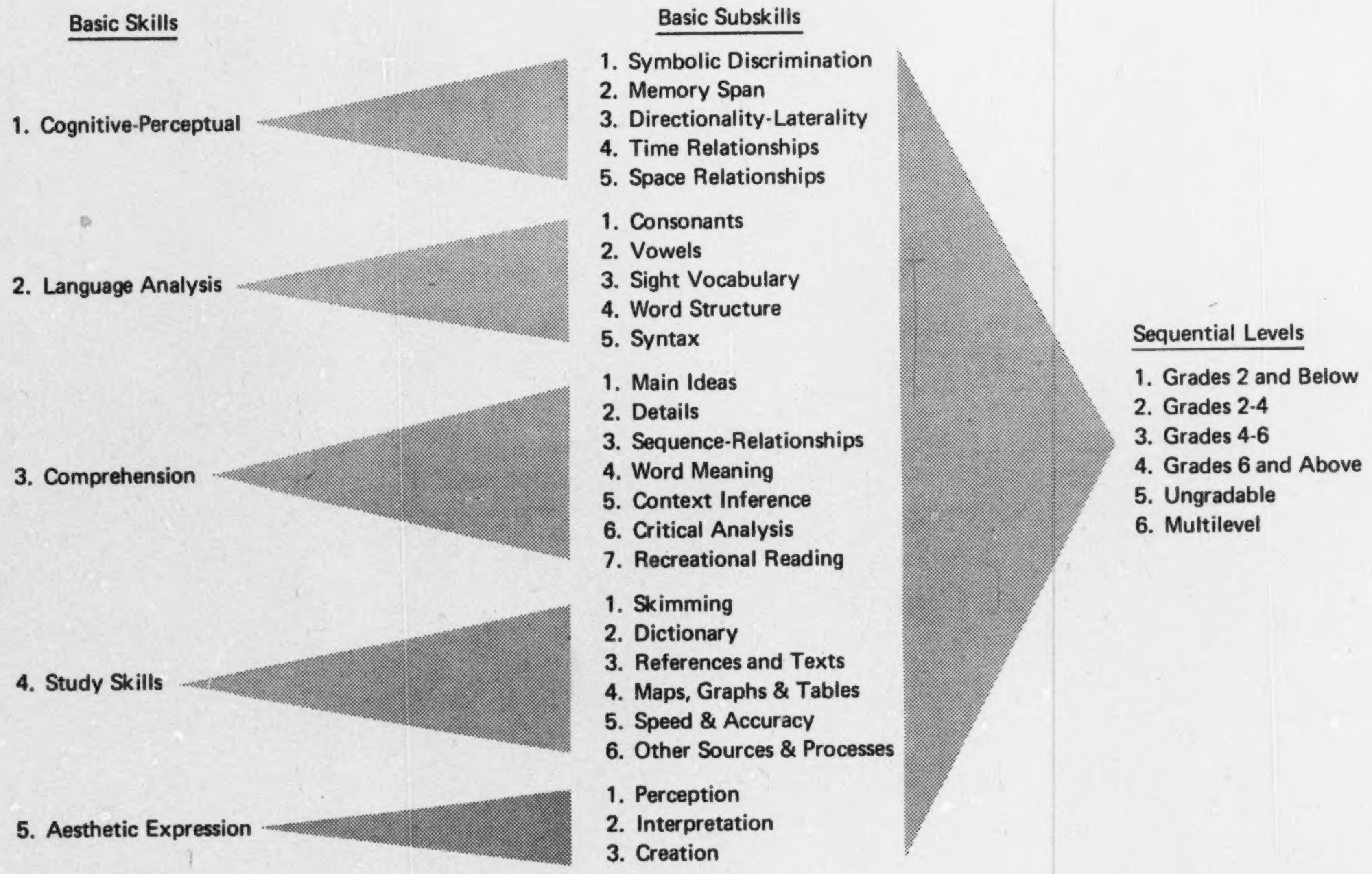
Facsimile of Transparency #1

APPENDIX A

RESEARCH AND DEMONSTRATION CENTER TAXONOMIC INSTRUCTION PROJECT TEACHERS COLLEGE, COLUMBIA UNIV.

THE TAXONOMY

THE WHAT OF INSTRUCTION



Basic Skills

1. Cognitive-Perceptual
2. Language Analysis
3. Comprehension
4. Study Skills
5. Aesthetic Expression

Basic Subskills

1. Symbolic Discrimination
2. Memory Span
3. Directionality-Laterality
4. Time Relationships
5. Space Relationships

1. Consonants
2. Vowels
3. Sight Vocabulary
4. Word Structure
5. Syntax

1. Main Ideas
2. Details
3. Sequence-Relationships
4. Word Meaning
5. Context Inference
6. Critical Analysis
7. Recreational Reading

1. Skimming
2. Dictionary
3. References and Texts
4. Maps, Graphs & Tables
5. Speed & Accuracy
6. Other Sources & Processes

1. Perception
2. Interpretation
3. Creation

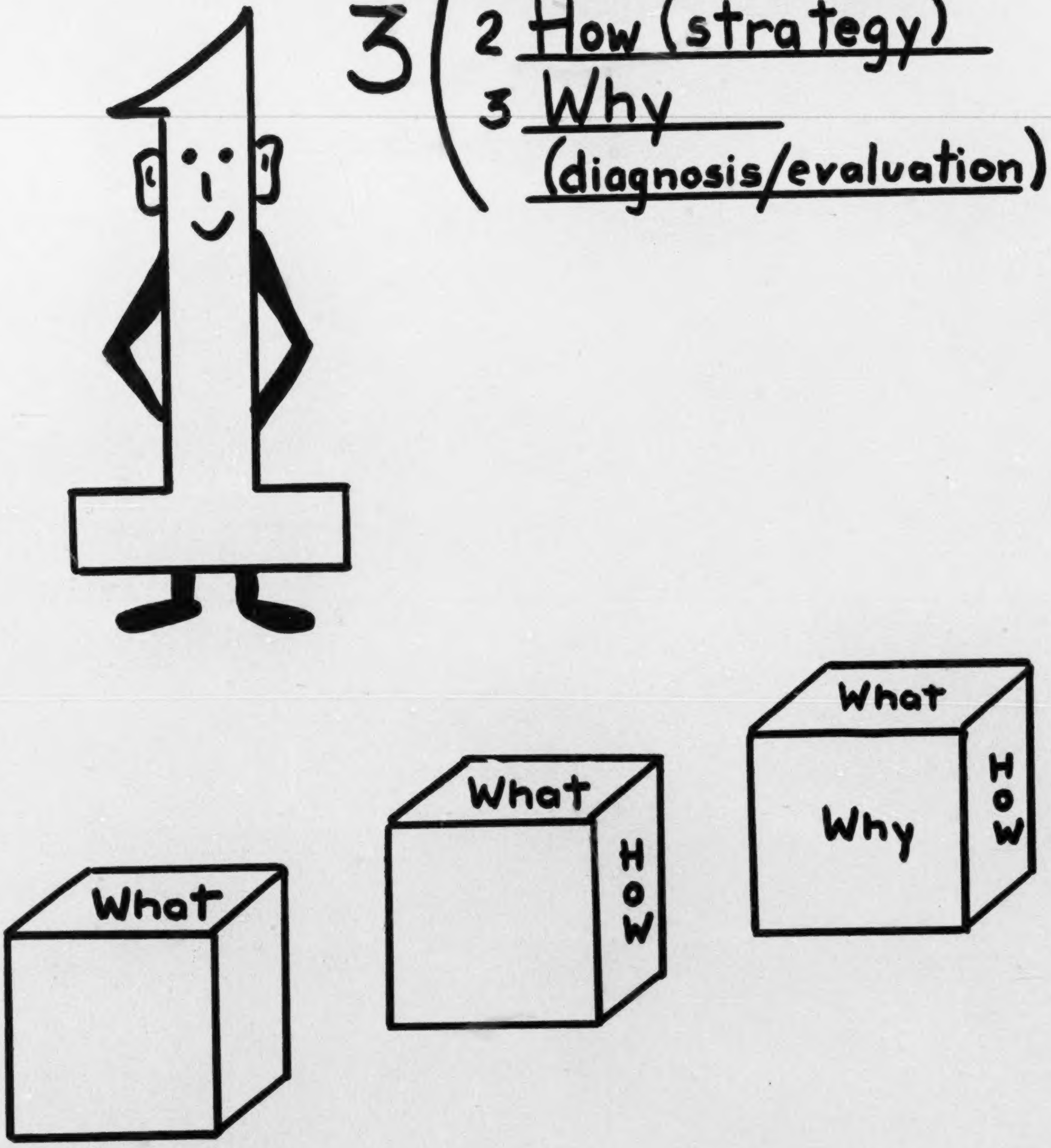
Sequential Levels

1. Grades 2 and Below
2. Grades 2-4
3. Grades 4-6
4. Grades 6 and Above
5. Ungradable
6. Multilevel

Facsimile of Transparency #2

INDIVIDUALIZATION

3
1 What (content)
2 How (strategy)
3 Why
(diagnosis/evaluation)



Facsimile of Transparency #3

Facsimile of Transparency #4

APPENDIX A

RESEARCH AND DEMONSTRATION CENTER | **TAXONOMIC INSTRUCTION PROJECT** | **TEACHERS COLLEGE, COLUMBIA UNIV.**

THE HOW OF INSTRUCTION

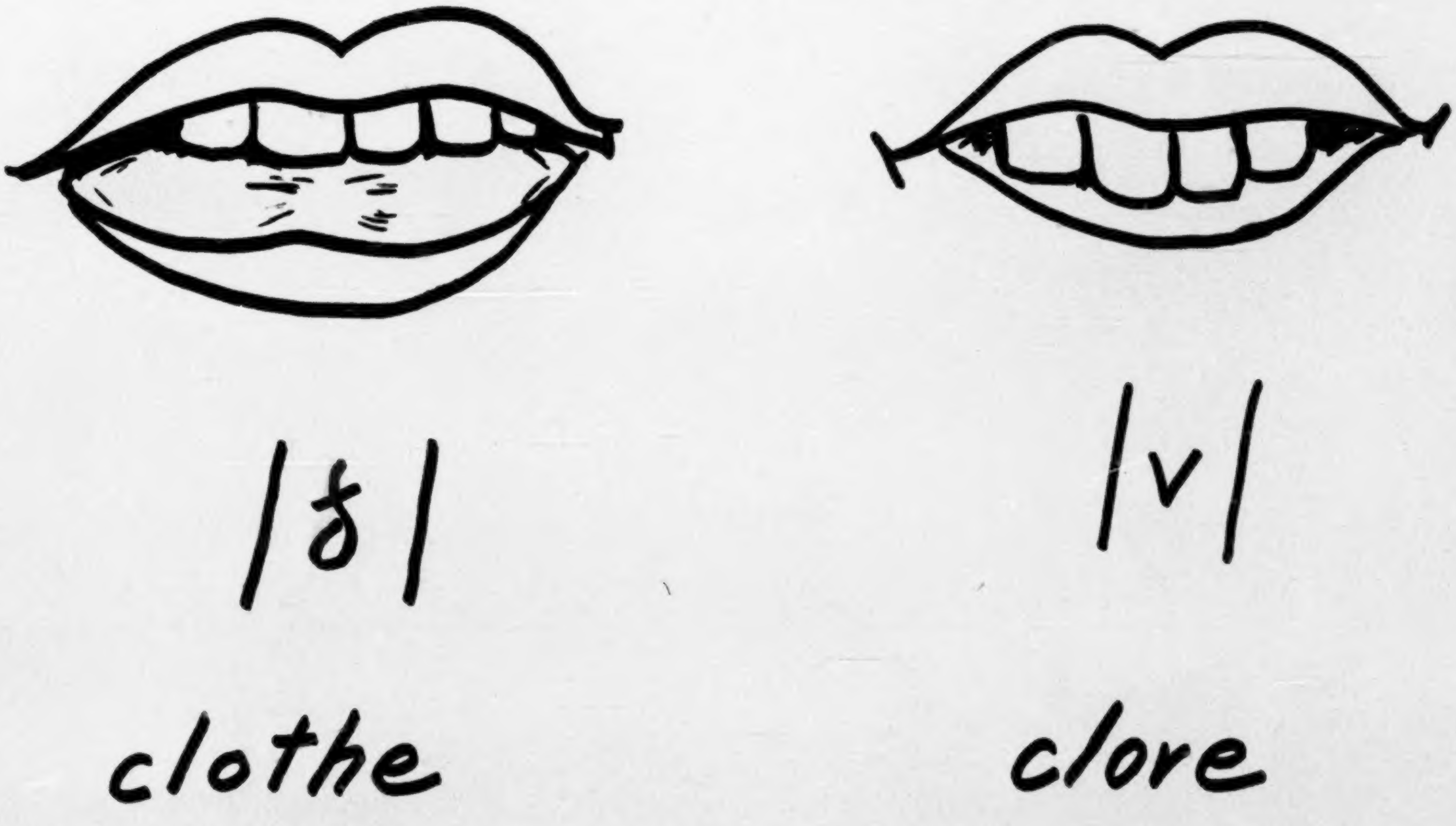
Instructional Method	Instructional Mode	Communication Input	Communication Output
1. Teacher-Total Group	1. Play-Chance	1. Visual	1. No Response
2. Teacher-Small Group	2. Play-Competition	*2. Auditory	2. Oral Response
3. Teacher-Student	3. Play-Puzzle	3. Kinesthetic	3. Motoric Response
4. Student-Total Group	4. Test-Response	*4. Auditory-Visual	4. Oral-Motoric Response
5. Student-Small Group	5. Exploration	5. Visual-Kinesthetic	
6. Student-Student	6. Programmed Response	6. Auditory-Kinesthetic	
7. Individual Self-Instruction	7. Problem Solving	7. Visual-Auditory-Kinesthetic	

*A distinction between extrinsic and intrinsic auditory input is being made. Whenever the purpose is a self-monitoring auditory input, the letter "I" will follow the appropriate number.

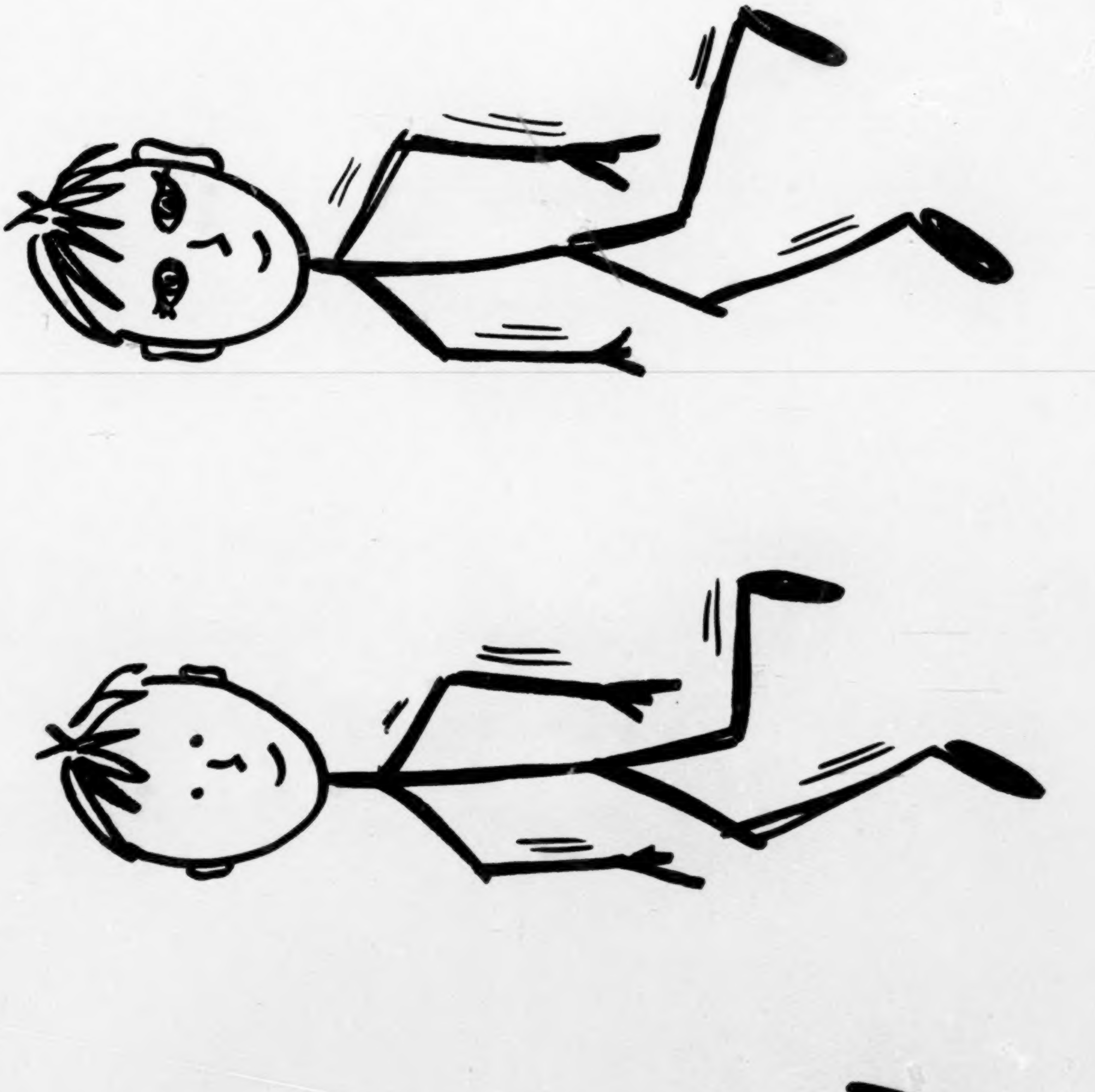
KINESTHETIC (Communication Input):

stimulation of the sensory system which transmits the sensation of movement or tension in muscles, joints and tendons.

Facsimile of Transparency #5

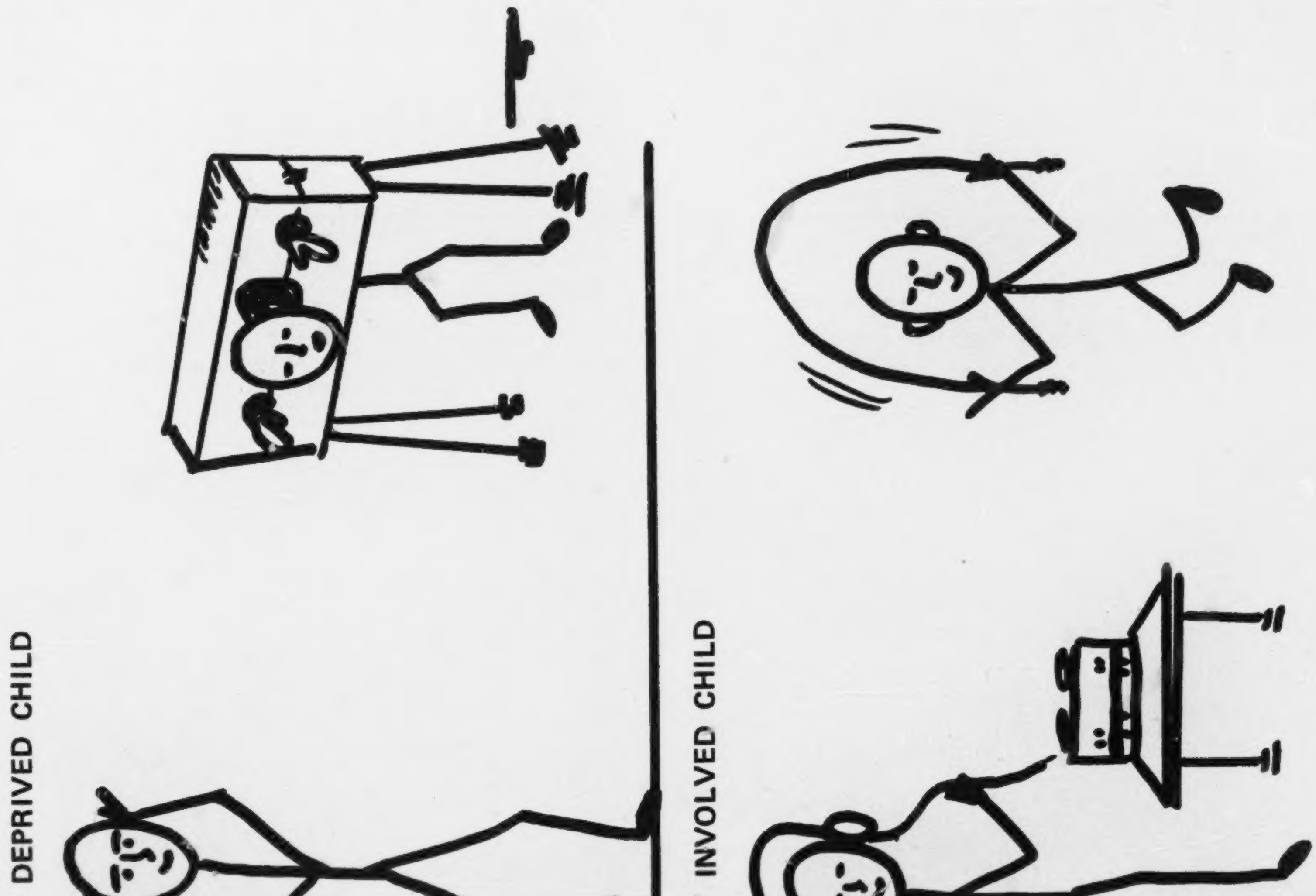


Facsimile of Transparency #6

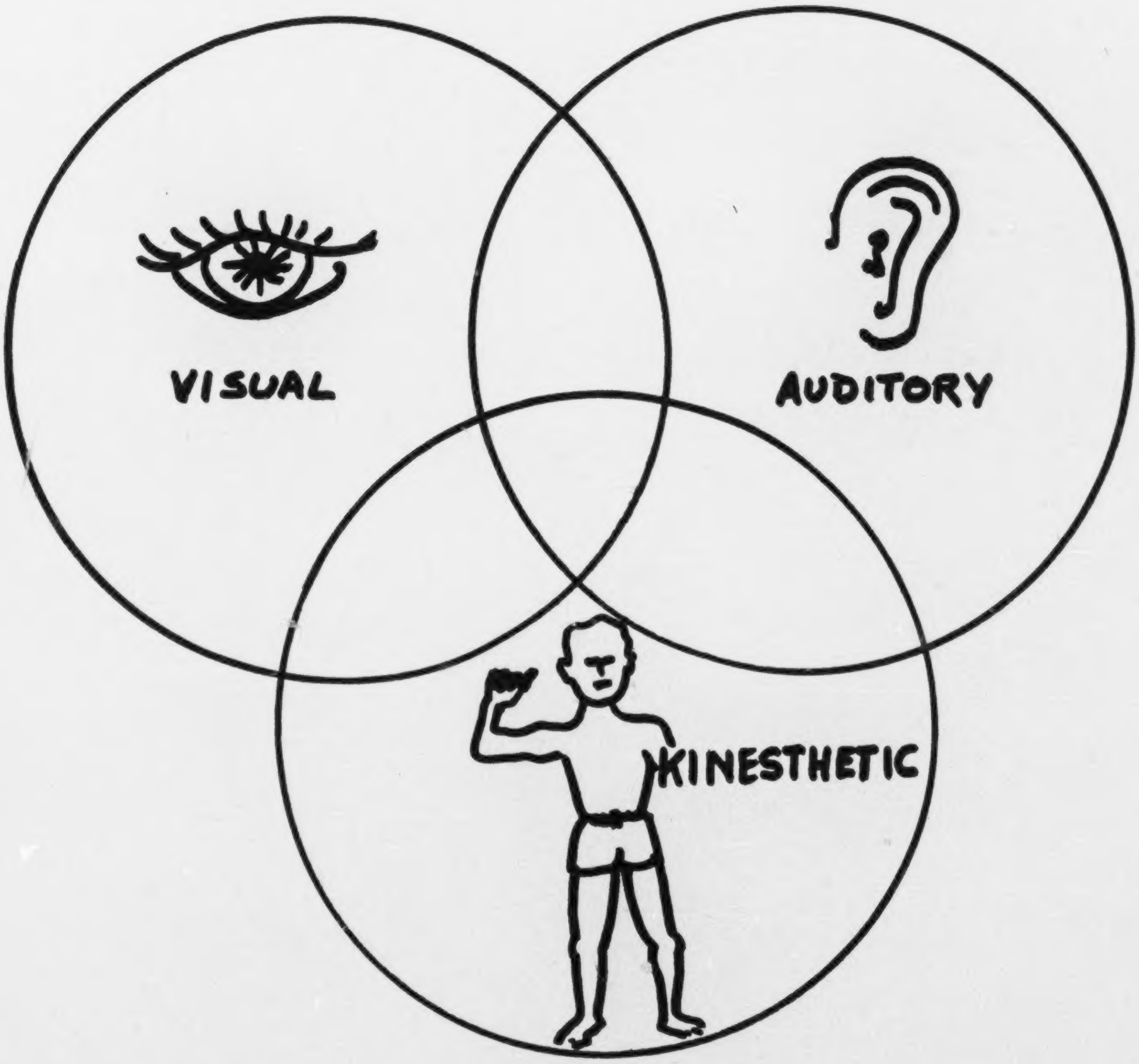


Facsimile of Transparency #7

Facsimile of Transparency #8



Facsimile of Transparency #9



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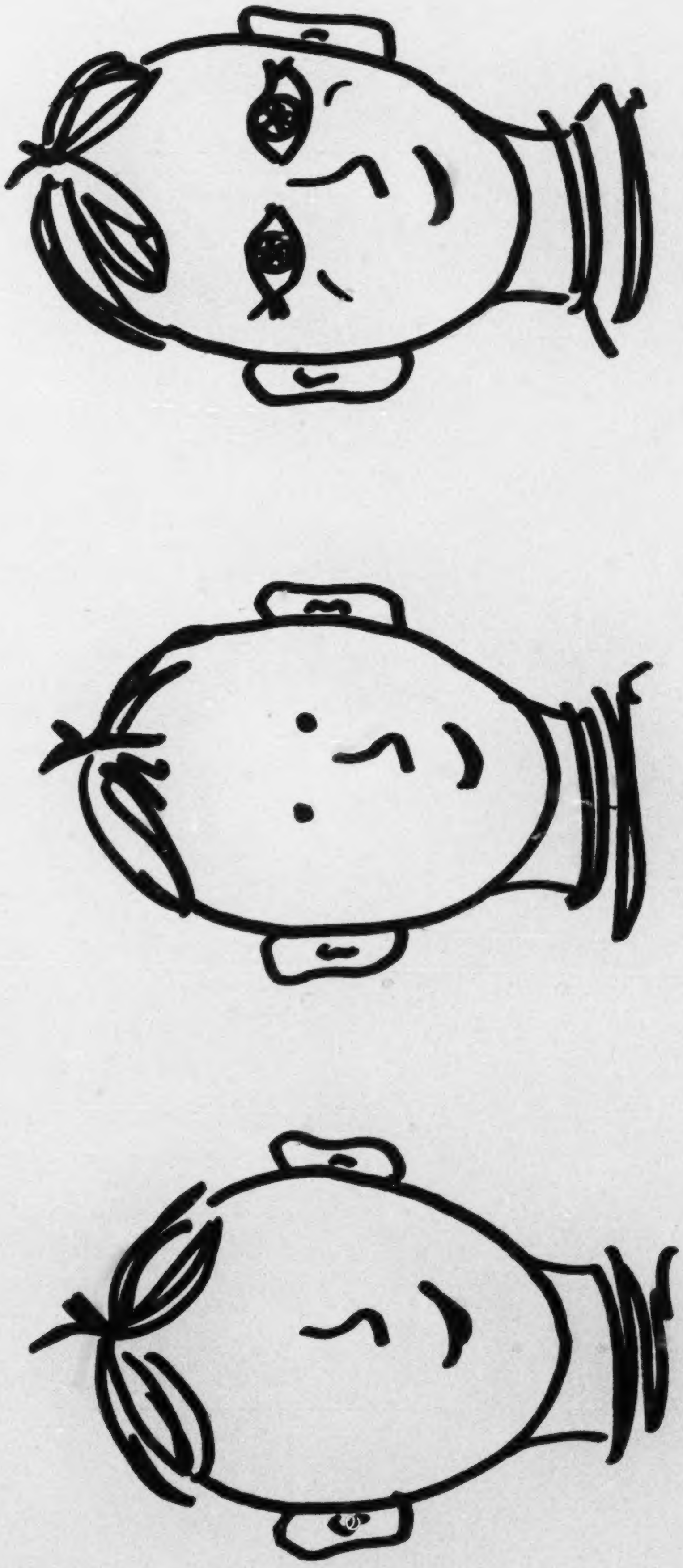

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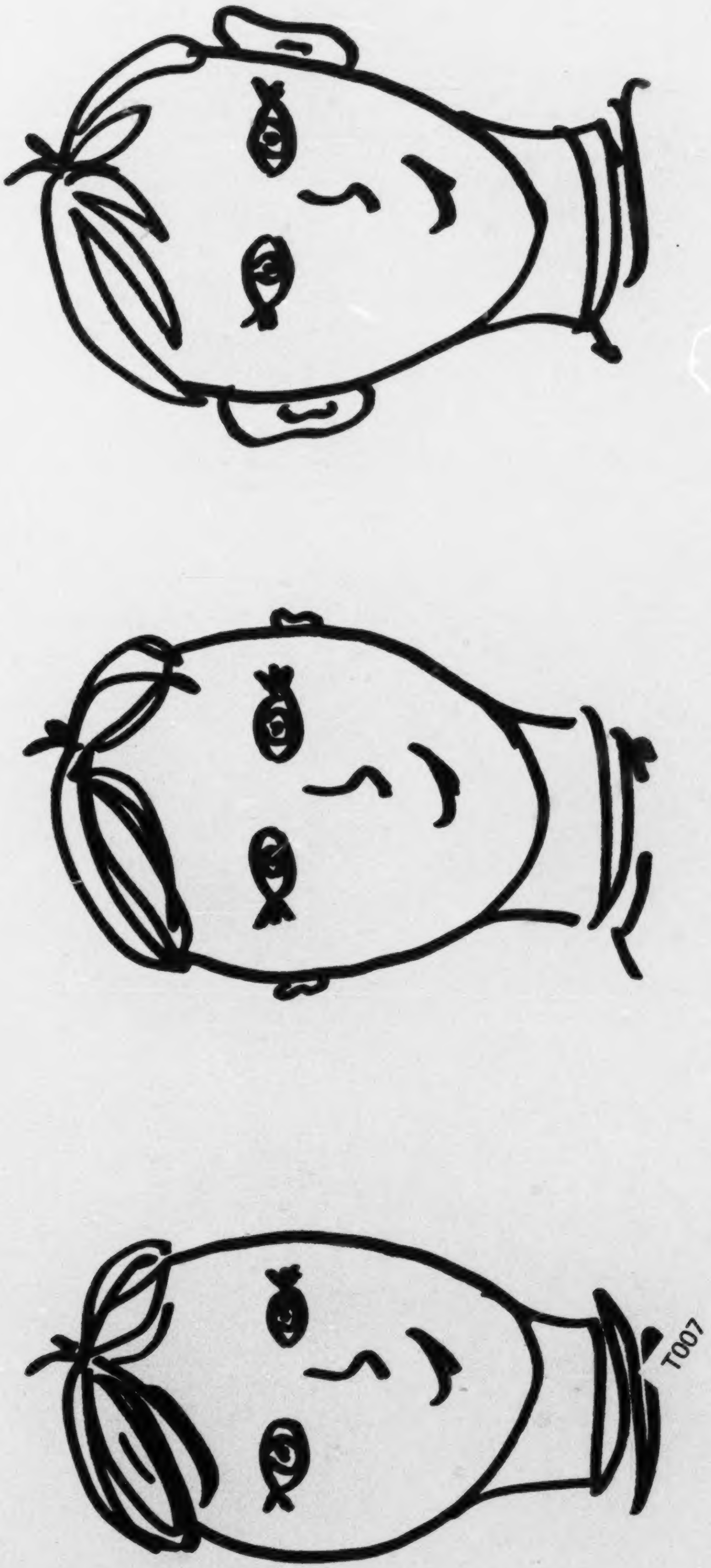


Facsimile of Transparency #12

Facsimile of Transparency #12A

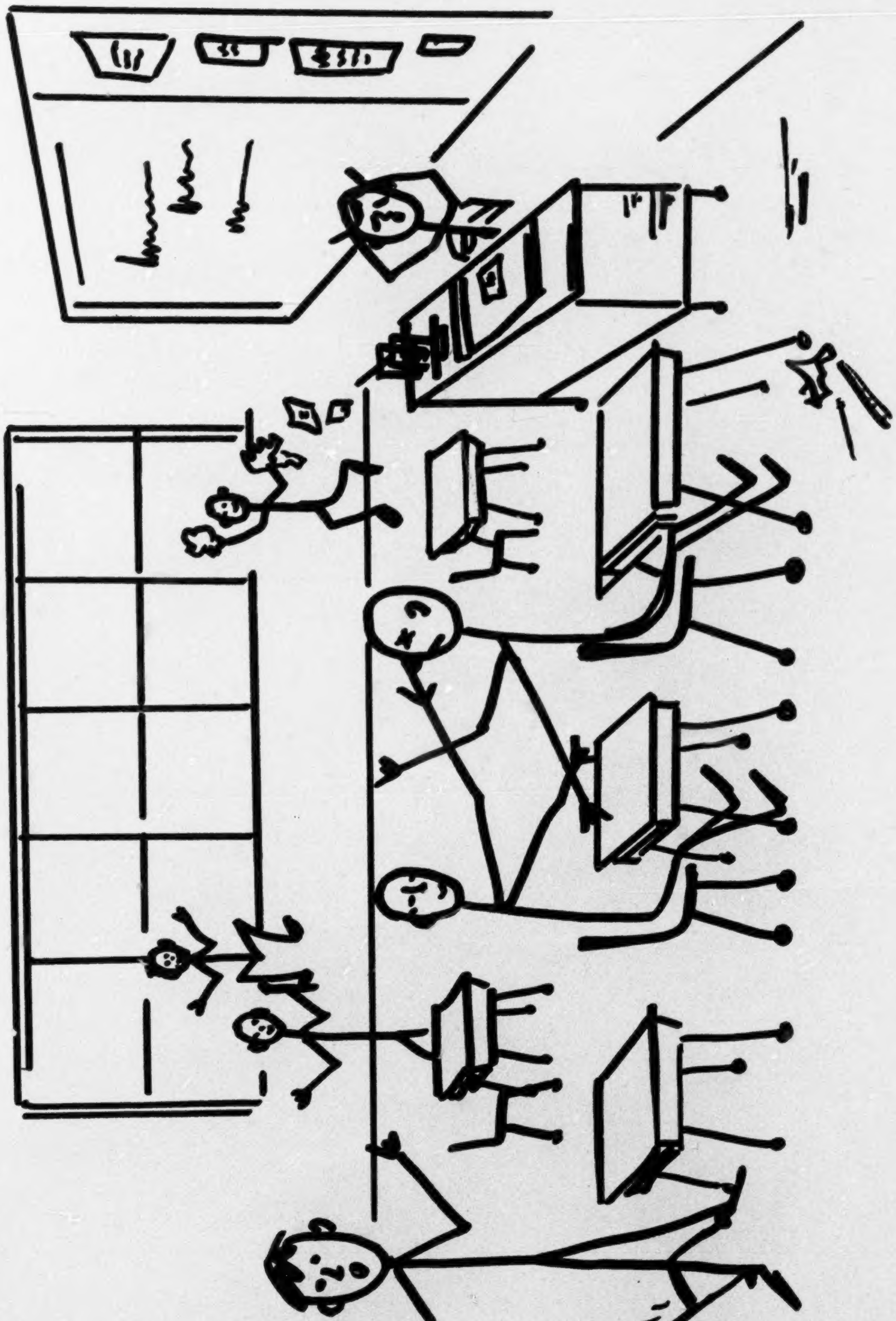
APPENDIX A

RESEARCH AND DEMONSTRATION CENTER **TAXONOMIC INSTRUCTION PROJECT** **TEACHERS COLLEGE, COLUMBIA UNIV.**

THE HOW OF INSTRUCTION

Instructional Method	Instructional Mode	Communication Input	Communication Output
1. Teacher-Total Group	1. Play-Chance	1. Visual	1. No Response
2. Teacher-Small Group	2. Play-Competition	*2. Auditory	2. Oral Response
3. Teacher-Student	3. Play-Puzzle	3. Kinesthetic	3. Motoric Response
4. Student-Total Group	4. Test-Response	*4. Auditory-Visual	4. Oral-Motoric Response
5. Student-Small Group	5. Exploration	5. Visual-Kinesthetic	
6. Student-Student	6. Programmed Response	6. Auditory-Kinesthetic	
7. Individual Self-Instruction	7. Problem Solving	7. Visual-Auditory-Kinesthetic	

*A distinction between extrinsic and intrinsic auditory input is being made. Whenever the purpose is a self-monitoring auditory input, the letter "I" will follow the appropriate number.



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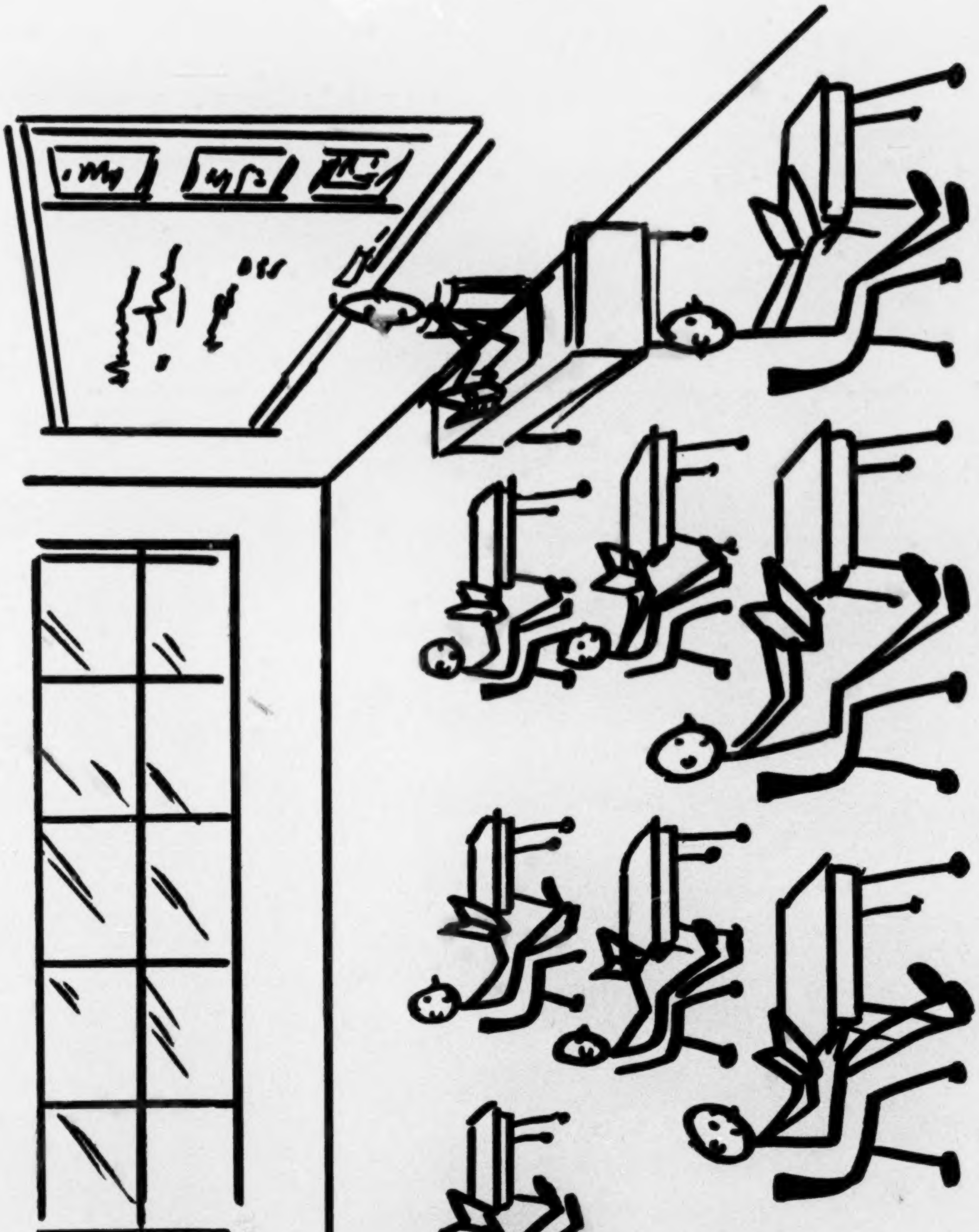

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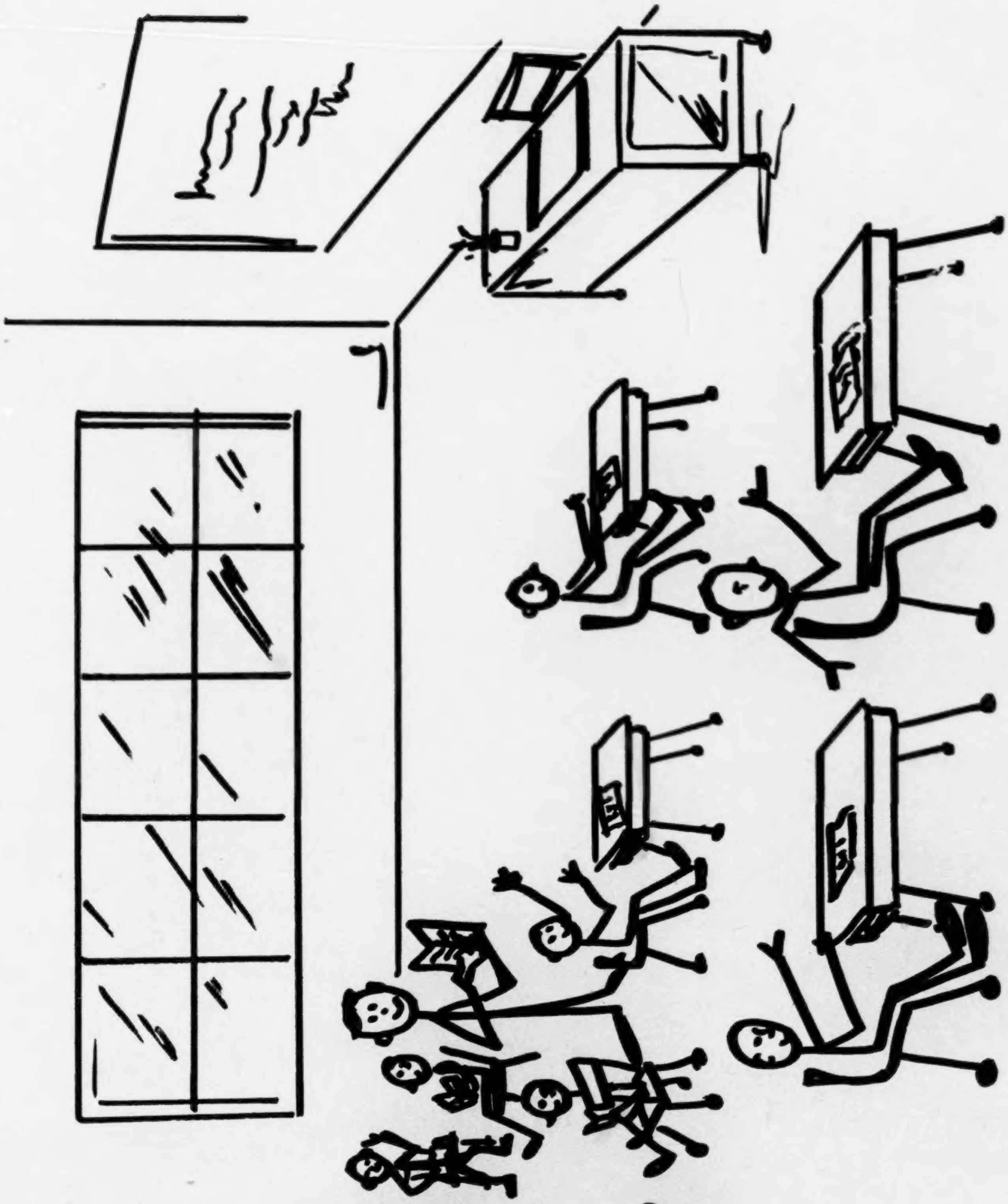


Facsimile of Transparency #15

Facsimile of Transparency #16

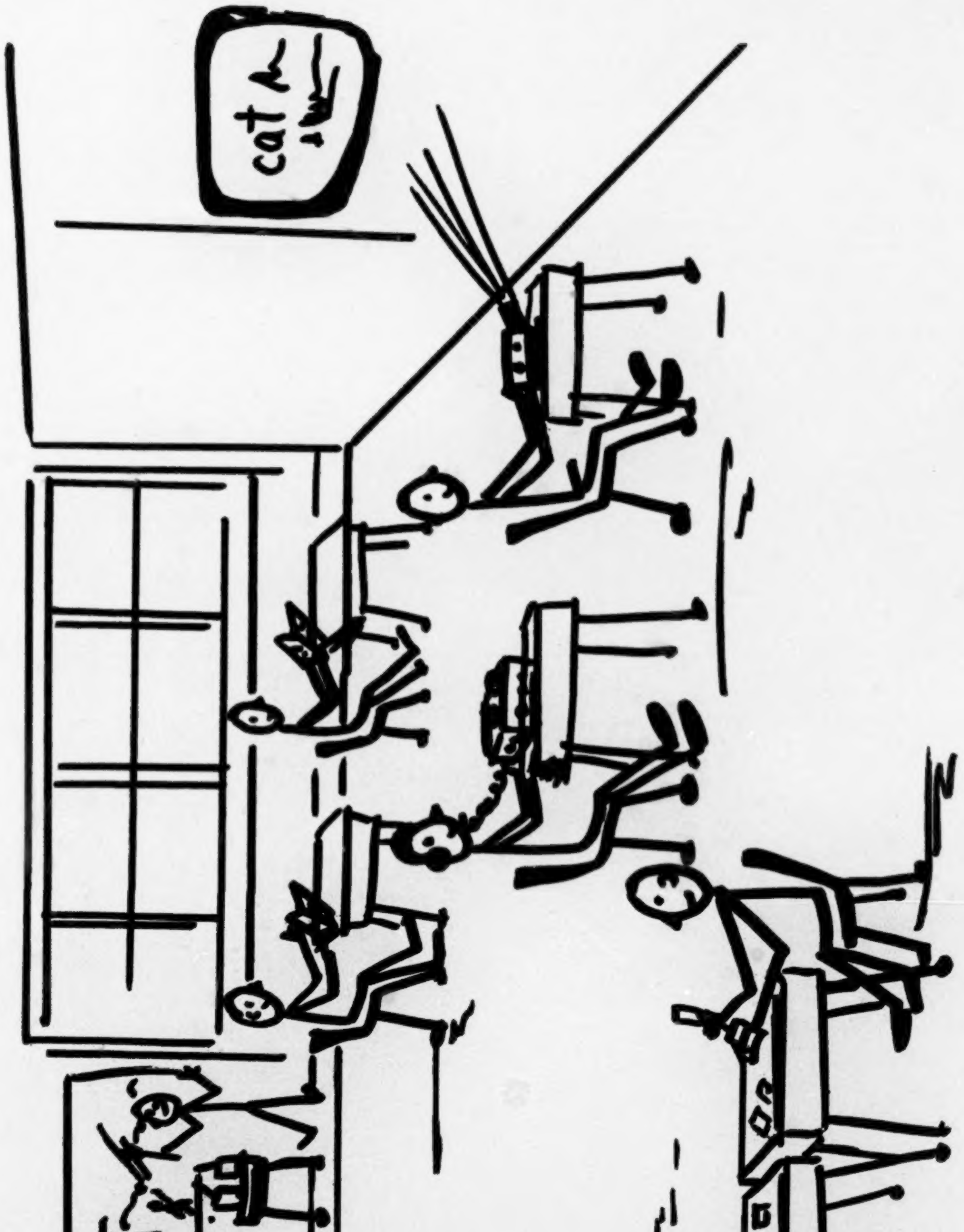
APPENDIX A

RESEARCH AND DEMONSTRATION CENTER **TAXONOMIC INSTRUCTION PROJECT** **TEACHERS COLLEGE, COLUMBIA UNIV.**

THE HOW OF INSTRUCTION

Instructional Method	Instructional Mode	Communication Input	Communication Output
1. Teacher-Total Group	1. Play-Chance	1. Visual	1. No Response
2. Teacher-Small Group	2. Play-Competition	*2. Auditory	2. Oral Response
3. Teacher-Student	3. Play-Puzzle	3. Kinesthetic	3. Motoric Response
4. Student-Total Group	4. Test-Response	*4. Auditory-Visual	4. Oral-Motoric Response
5. Student-Small Group	5. Exploration	5. Visual-Kinesthetic	
6. Student-Student	6. Programmed Response	6. Auditory-Kinesthetic	
7. Individual Self-Instruction	7. Problem Solving	7. Visual-Auditory-Kinesthetic	

*A distinction between extrinsic and intrinsic auditory input is being made. Whenever the purpose is a self-monitoring auditory input, the letter "I" will follow the appropriate number.



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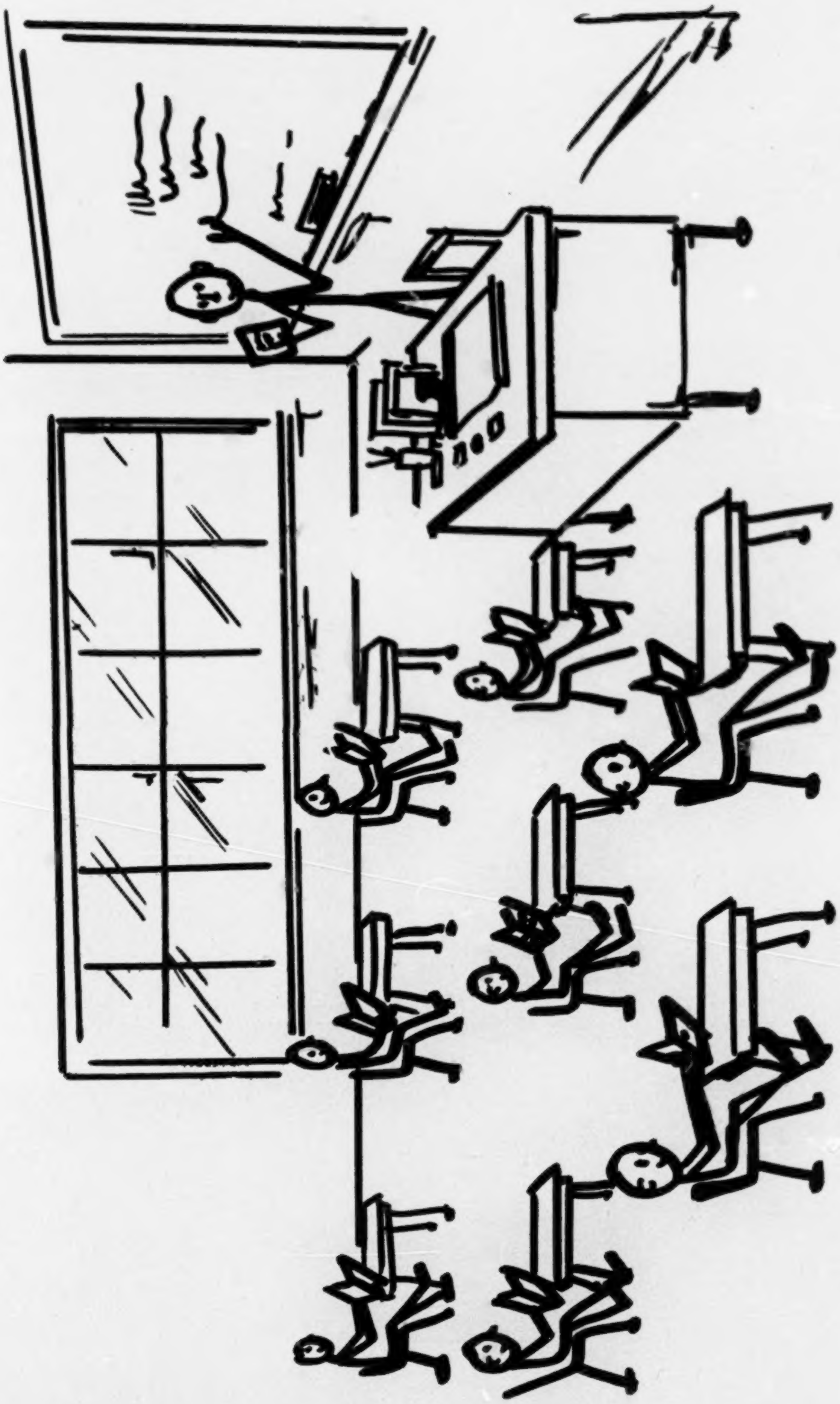
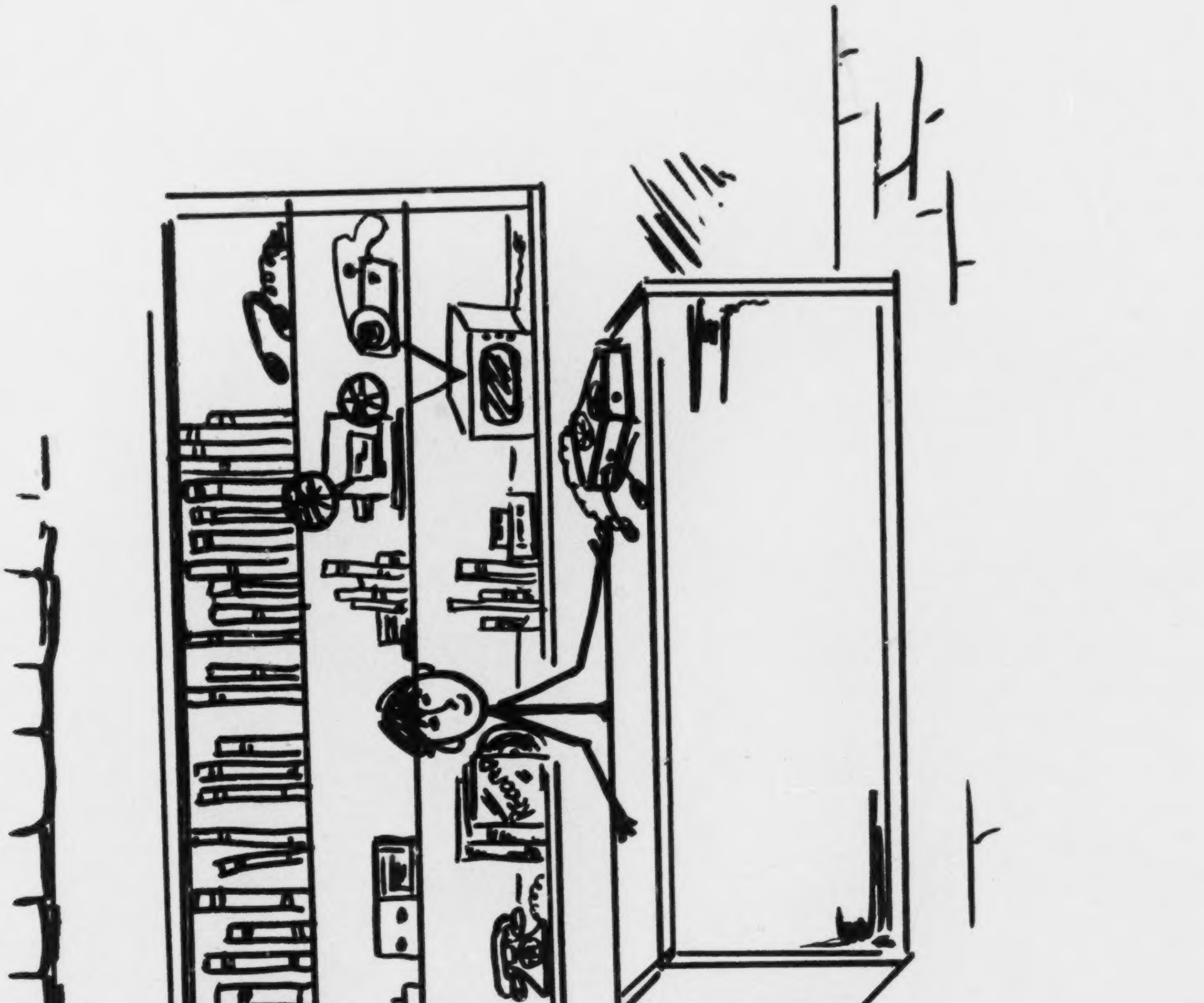


Facsimile of Transparency #18

PERSONALIZATION: after individualization has been achieved, the child is exposed to settings, modes, inputs and outputs that force him to use his strengths to decrease his weaknesses. It is a process by which the child becomes less sensitive to frustrations generated in learning situations.

Facsimile of Transparency #19



Facsimile of Transparency #20

C.F. ____________________

Catalogue Number

Retrieval Number

Material Identification:

Publisher:

Description:

Method	Mode	Input	Output	Material Source

Facsimile of Transparency #21

STRATEGY: the unique plan incorporating the last four numbers of the Taxonomy (instructional method, instructional mode, communication input, communication output) that is conveyed by a material to totally involve the child in the task. Strategy should be thought of in terms of motivation. The motivational factor may proceed from any one of the four components, from the material itself, or from something extrinsic that is added, e.g., M & M's, a hand on the shoulder, etc.

Facsimile of Transparency #22

PROCEDURE FOR IMPLEMENTING TAXONOMIC INSTRUCTION PROJECT

1. IDENTIFICATION OF THE PROBLEM
   Diagnosis through testing, individual and group, formal and informal; description of child in terms of test results

2. TEAMWORK FOR INDIVIDUALIZATION
   Procedure between teacher and researcher to develop long range lesson plans and individual prescriptions

3. DEMONSTRATIONS
   Field testing by researcher of individual prescriptions within classroom or, if need be, outside of classroom

4. EVALUATION
   Analysis of the effectiveness of remediation based on observation of student behavior in the classroom and teacher feedback

5. REFINEMENT
   More definitive description of child in terms of his revealed strengths and weaknesses

6. EXAMINATION
   Search through the reservoir of content and strategies for a "goodness of fit" for each child

7. PERSONALIZATION
   Step following successful individualization in which the child uses his strengths to minimize his weaknesses within new settings

8. POST TESTING
   Means by which the child's growth can be assessed

Facsimile of Transparency #23

Teachers College-Columbia University
Research and Demonstration Center

Taxonomic Instruction Project
P.S. 9 – Queens

DIAGNOSTIC TEST

NAME CLASS DATE

FIRST SOUND

Sample:	des	mag	sid
1.	ral	hink	weh
2.	yup	nev	feld
3.	lib	obs	hib
4.	min	yis	bal
5.	yup	derf	jeb
6.	veg	ral	zin
7.	feld	dor	bif
8.	mik	kip	pak
9.	zim	jul	gub
10.	bilf	vit	das
11.	pas	kic	zu
12.	jek	vum	qua
13.	gub	cet	tuc
14.	rin	cos	gel
15.	zil	vem	dis
16.	nev	pul	luk
17.	sab	ferb	cos
18.	sylp	yis	ferd
19.	pank	rin	das

LAST SOUND

Sample:	baz	fim	dat
1.	zug	yup	ponk
2.	sab	kic	yim
3.	filb	lef	pyl
4.	san	fas	byn
5.	kej	pik	filb
6.	deln	kim	sik
7.	nim	bil	lar
8.	cet	gip	puy
9.	pul	dap	tiv
10.	feld	sap	cib
11.	kim	ven	derf
12.	rul	lur	bub

Facsimile of Transparency #24

Teachers College-Columbia University
Research and Demonstration Center

Taxonomic Instruction Project
P.S. 9 – Queens

DIAGNOSTIC TEST

NAME ______________________________ CLASS _________ DATE ________

I.

1. l b t c k v n y r x q z
d f g h j s w m p ____/21____

2. l b t c k v n y r z
d f g h j s w m p ____/21____

II.

1. a e i o u ____/5____
2. a e i o u ____/5____
3. a e i o u ____/5____
4. i u e a o ____/5____
5. e o i a u ____/5____

III.

st cl ch fr gr tw th sm wh pl
bl sw sh br dr fl tr sn sp ____/19____

IV.

scr shr str spr thr spl ____/6____

V.

not-note fat-fate pet-Pete
win-wine cub-cube ____/10____

VI.

feed mail moat card pain
soil road part seat coin
beak heel ray may ____/14____

Facsimile of Transparency #25

Teachers College-Columbia University
Research and Demonstration Center

Taxonomic Instruction Project
P.S. 9 – Queens

COMPOSITE OF DIAGNOSTIC TEST

Initial and Final Consonant Discrimination

	First Sound				Last Sound		
1	ral	weh	hink	1	zug	yup	ponk
2	yup	feld	nev	2	sab	kic	yim

I. Name of Alphabet Letter

l b t c k v n y r x q

Sound of Alphabet Letter

z d f g h j s w m p

II. Name of Long and Short Vowels (Sounds – Orally and Auditually)

a e i o u

III. Consonant Blend Discrimination

st cl ch fr gr tw th sm wh pl bl sw sh

IV. Three Consonant Blend Discrimination

scr shr str thr spl spr

V. Rule of "Final e": distinguishing long and short vowel sounds

not-note fat-fate pet-Pete win-wine cub-cube

VI. Diphthong Discrimination

feed mail card moat pain soil road part seat

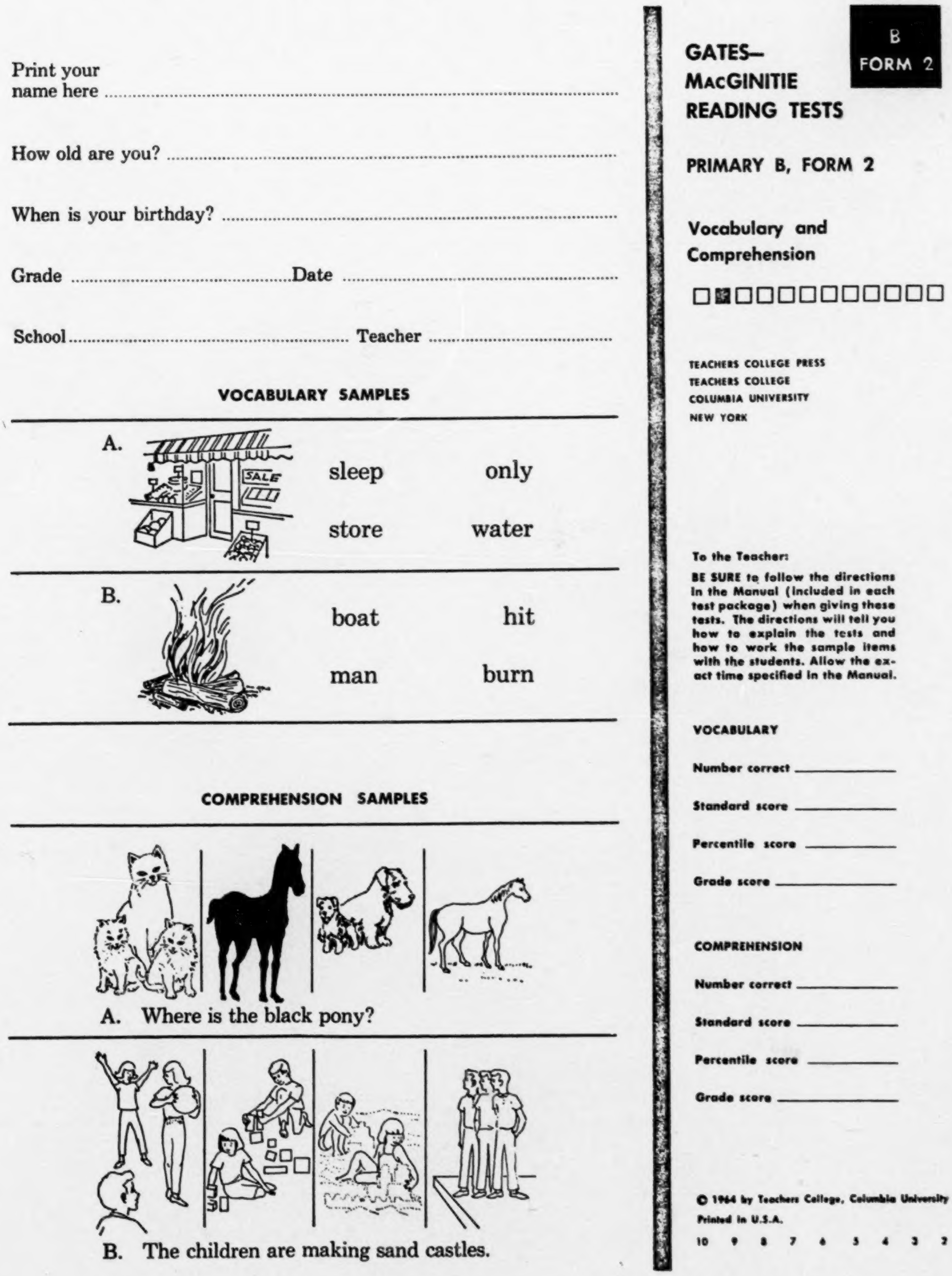
VII. Syllabication

inside overlook invited depression contentment

Knowledge of Written Letters of Alphabet

1. - (Capital)
2. - (Small)

Facsimile of Transparency #26



Print your
name here ....

How old are you? ....

When is your birthday? ....

Grade .... Date ....

School .... Teacher ....

VOCABULARY SAMPLES

A.

sleep	only
store	water

B.

boat	hit
man	burn

COMPREHENSION SAMPLES

A. Where is the black pony?

B. The children are making sand castles.

**GATES–
MACGINITIE
READING TESTS**

**B
FORM 2**

PRIMARY B, FORM 2

**Vocabulary and
Comprehension**

☐■☐☐☐☐☐☐☐☐☐☐

TEACHERS COLLEGE PRESS
TEACHERS COLLEGE
COLUMBIA UNIVERSITY
NEW YORK

To the Teacher:
BE SURE to follow the directions in the Manual (included in each test package) when giving these tests. The directions will tell you how to explain the tests and how to work the sample items with the students. Allow the exact time specified in the Manual.

VOCABULARY

Number correct ____________

Standard score ____________

Percentile score ____________

Grade score ____________

COMPREHENSION

Number correct ____________

Standard score ____________

Percentile score ____________

Grade score ____________

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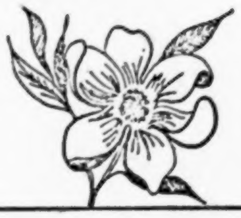
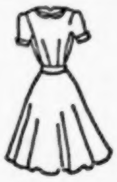
Printed in U.S.A.
10 9 8 7 6 5 4 3 2

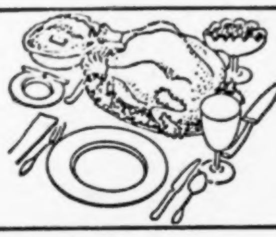
Facsimile of Transparency #28, Cover Sheet, Gates-MacGinitie

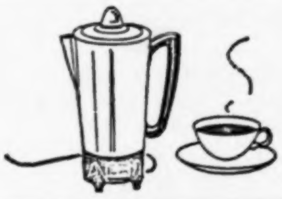
START HERE

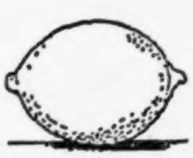
Vocabulary

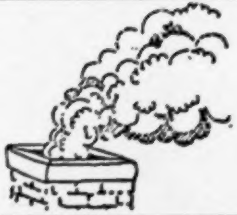
1.

after flower
church floor

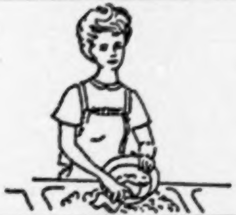
2.

first drive
cause dress

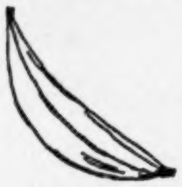
3.

doctor finger
dinner ocean

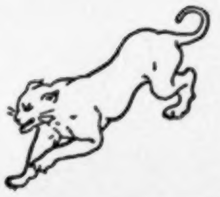
4.

toast college
connect coffee

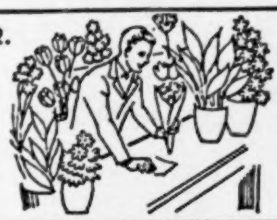
5.

legion lecture
lemon liquor

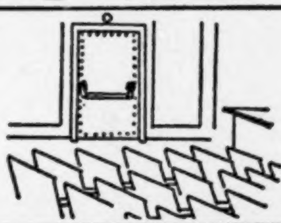
6.

shake smoke
weak smile

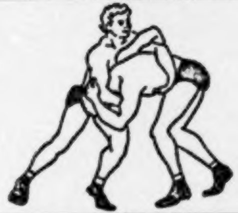
7.

housewife holiness
housetop hemisphere

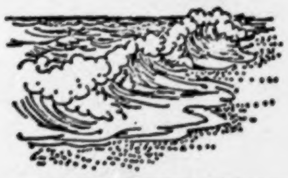
8.

barren beware
banana innocence

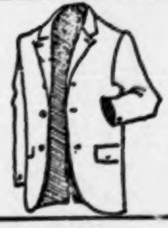
41.

final knife
fierce success

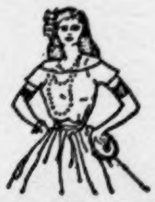
42.

distant meadow
frost merchant

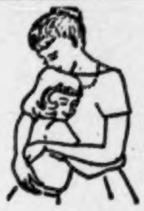
43.

extra exact
exit ticket

44.

stranger nestle
wrestle wringer

45.

frail fowl
fatal foam

46.

garment instant
govern benefit

47.

gymnasium gypsy
gurgle grassy

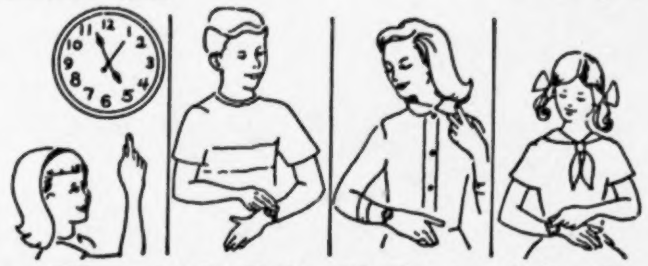
48.

embrace emperor
vanish surface

STOP

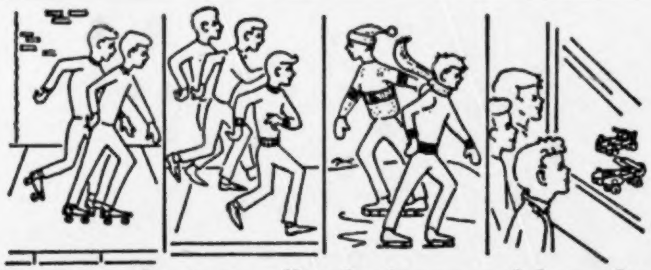
Facsimile of Transparency #29, Vocabulary Composite, Gates-MacGinitie

START HERE

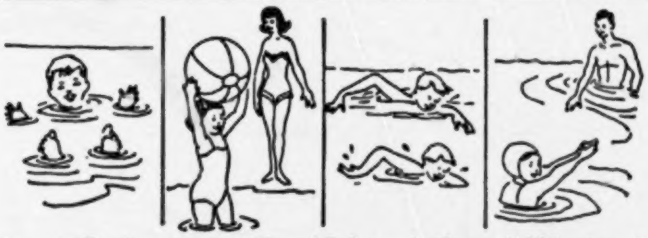
Comprehension



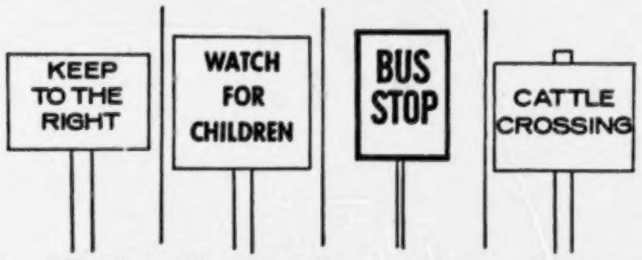
1. Where is the little girl who is winding her watch?



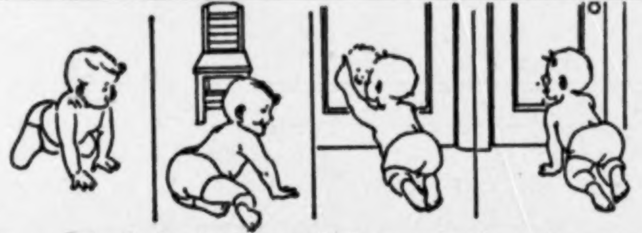
2. It was fun to go roller skating up and down the wide sidewalk.



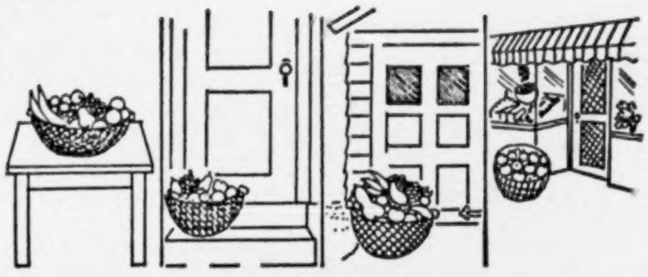
3. "Swim to me," said her father. "I'll stand here and count. Take a deep breath. Then see if you can come this far in five strokes."



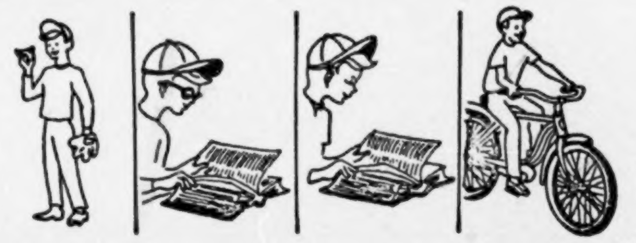
4. Which traffic sign tells the driver to look out for boys and girls?



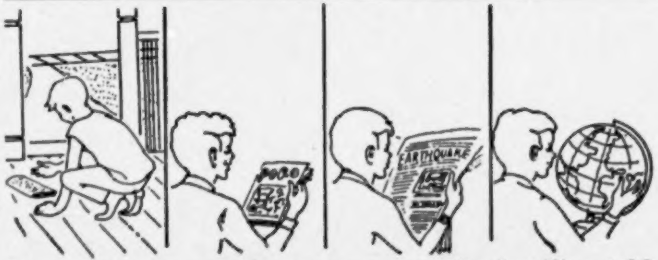
5. The baby had crawled over to the mirror on the door. His mother found him laughing and pointing to himself in the mirror.



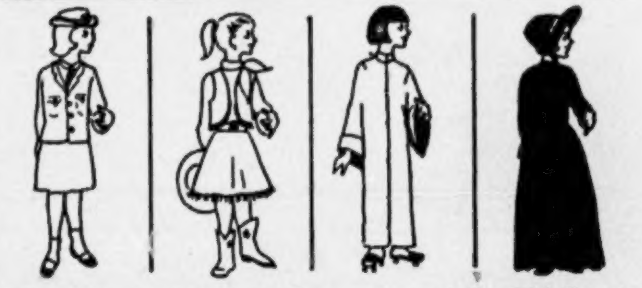
31. In the fall, they could go into their garden and gather different fruits for a salad. Almost any day in September, you would see a basket of several fresh fruits outside the kitchen door.



32. Jack didn't need his glasses when he was playing baseball, but he needed them for reading. Sometimes he read without them, but his eyes became very tired if he did this for long. Mark the picture that shows when Jack should have put on his glasses.



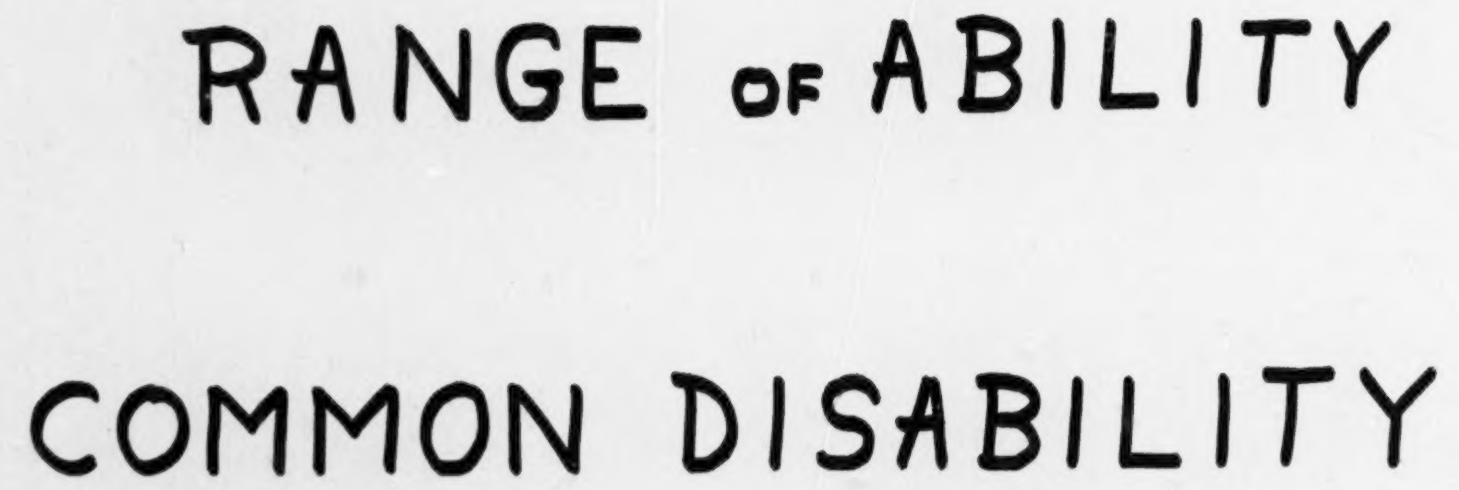
33. When the morning paper came, the headline told of an earthquake on a small island in the Pacific Ocean. David looked at his globe to see exactly where the earthquake had occurred. Mark the picture that does not belong with the story.



34. Betty will be dressed as a nurse at the Girl Scouts costume party next month. Flora will wear her mother's new Chinese silk kimono. Guess what Jane will be! A princess! How will Flora look?

STOP

Facsimile of Transparency #30, Comprehension Composite, Gates-MacGinitie



RANGE OF ABILITY

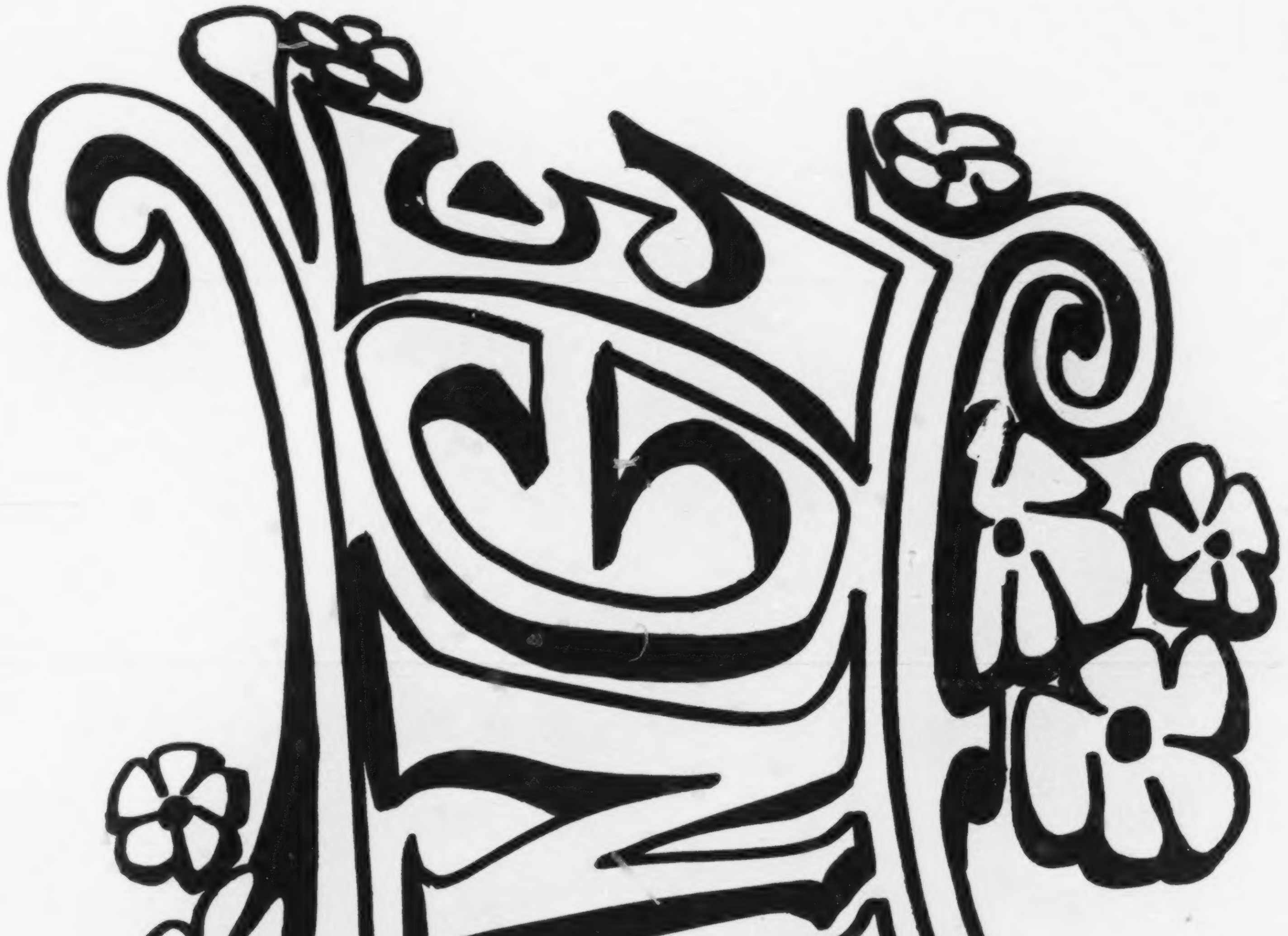
COMMON DISABILITY

Facsimile of Transparency #32

RANGE OF ABILITY

COMMON DISABILITY

Facsimile of Transparency #33



Facsimile of Transparency #34

STRATEGY: the unique plan incorporating the last four numbers of the Taxonomy (instructional method, instructional mode, communication input, communication output) that is conveyed by a material to totally involve the child in the task. Strategy should be thought of in terms of motivation. The motivational factor may proceed from any one of the four components, from the material itself, or from something extrinsic that is added, e.g., M & M's, a hand on the shoulder, etc.

Facsimile of Transparency #35

PROCEDURE FOR IMPLEMENTING TAXONOMIC INSTRUCTION PROJECT

1. IDENTIFICATION OF THE PROBLEM
   Diagnosis through testing, individual and group, formal and informal; description of child in terms of test results

2. TEAMWORK FOR INDIVIDUALIZATION
   Procedure between teacher and researcher to develop long range lesson plans and individual prescriptions

3. DEMONSTRATIONS
   Field testing by researcher of individual prescriptions within classroom or, if need be, outside of classroom

4. EVALUATION
   Analysis of the effectiveness of remediation based on observation of student behavior in the classroom and teacher feedback

5. REFINEMENT
   More definitive description of child in terms of his revealed strengths and weaknesses

6. EXAMINATION
   Search through the reservoir of content and strategies for a "goodness of fit" for each child

7. PERSONALIZATION
   Step following successful individualization in which the child uses his strengths to minimize his weaknesses within new settings

8. POST TESTING
   Means by which the child's growth can be assessed

Facsimile of Transparency #36

UNIT III CHAPTER 12

THE TAXONOMIC INSTRUCTION PROJECT WORKSHOP

THREE CASE STUDIES

The first sessions of the workshop were devoted to the staff's simulation of our experiences at P.S. 9 and the video presentation of a few of our strategies. Our next session has been designed to give the teachers the opportunity to apply, with the staff's assistance, our taxonomic principles of individualized prescriptive instruction through the manipulation of the taxonomic numbers.

To gain an understanding of our population, the staff has delineated the types of emotional disturbance and social maladjustment that are found in special schools (See Appendix G). As far as possible, the delineations are couched in non-psychological terms because the staff consists of specialists in education rather than psychology.

The children exhibit two kinds of behavior in the classroom, social interaction with their peers and the teacher and interaction with academic treatment. Therefore, our children are characterized by a dual term, one for each of the observable behaviors. Social behavior has four classifications: aggressive, withdrawn, combination (aggressive/withdrawn), and no observable emotional disturbance. Academic behavior is classified by the following terms: dyselxic, non dyslexic/non achiever, non English, non standard English, thought disordered, and achiever. The descriptive term characterizing a specific child is a combination of any two of these terms – the first being his observable classroom behavior and the second his academic behavior. It is not our intention to just label the child. His presence in a school of this type is enough of a label. But we are investigating ways of extending our individualized prescriptive strategies to groups of children. This process of generalization can be executed only if we have a systematic procedure for delineating children having similar behavioral styles. Only a tentative beginning has been made in this direction, but we plan to expend considerable effort on this aspect of the project in the coming school year.

We have drawn upon the school records to develop case histories for three of our children who have been described according to our classification system. The following case histories include pertinent details of the children and their backgrounds, excerpts from the anecdotal records of the schools from which they were expelled, our diagnostic findings and the taxonomic treatment designed for these children specified by the taxonomic number code; the first three figures of which designate the content whereas the last four represent the strategies. In this workshop the staff, with your participation, will transpose these numbers into their appropriate descriptive terms. Also, we will explore together why the particular content and strategies were used, how they evolved from the diagnosis, what modifications in the original design were made after field testing and finally, how effective the treatments were in generating the child's involvement with the learning task.

The case histories are followed by thumbnail sketches of children requiring treatment and by descriptions of treatments in current use. It will be your task to assign taxonomic identification to these exercises. You will be surprised to see the diversity of approach that is evoked by this use of the Taxonomy, and we will explore together the effectiveness of these diverse approaches.

Finally, the workshop will end with your questions, discussions of your classroom problems, and your evaluation of the project's principles and procedures. The staff members will provide the best answers they have. It is hoped that this final session of the workshop will elicit from you a good deal of thought, stimulating suggestions for the project and projected plans for children in your classrooms.

Fictitious names of students used throughout Unit III, Chapters 11 and 12.

TYPES OF EMOTIONALLY DISTURBED-SOCIALLY MALADJUSTED CHILDREN

FOUND IN SPECIAL SCHOOLS

I. Social Behavior

A. Agressive

The aggressive child tends to resolve conflict by acting out toward:

1. peers
2. authority
3. learning environment
4. material objects

The aggressive child characteristically exhibits bursts of energy toward the immediate, individual situation and toward the general environment with which he is interacting. He may be adept at manipulating those around him, thus evoking more reaction than his peers. He can trigger potentially explosive situations within the classroom.

B. Withdrawn

The withdrawn child may not respond to sensory stimulation. His interaction with peers and adults may be negligible. The child may isolate himself from group activity and for this reason, may seem lethargic. This self-imposed isolation of the withdrawn child often assumes a "daydream-like" posture. When the child does enter into a group activity, he may be at the mercy of the other children.

C. Combination (Aggressive-Withdrawn)

This child may exhibit any number of characteristics described under the headings Aggressive and Withdrawn. Within a given time period, the child may manifest alternating types of behavior – all of which are distinctly anti-social. The characteristics may become apparent in child-peer interaction.

D. No Observable Emotional Disturbance

Within the setting of this classroom, this child is adjusted. He completes assignments, accepts direction and responds well to constructive criticism. He displays enthusiasm and interacts adequately with his peers. The adjusted child usually is expressively eager to return to a regular school.

II. Academic Behavior

A. Dyslexic

The child may appear alert and eager to learn. He is usually of average or above average intelligence. He may also work diligently and appear to respond to all teacher efforts; however, he may regress in spite of his own application and increased teacher attention.

The child may exhibit all or some general characteristics of dyselxia:

1. high distractability
2. inadequate word storage
3. limited digit span

This child may also experience severe difficulty in auditory and visual perception. Any of the following specific characteristics may be observed:

1. poor motor coordination
2. confusion of directionality
3. letter and word reversal
4. poor auditory synthesis
5. poor blending ability

B. Non dyslexic/Non achiever

For this child, notable evidence cannot substantiate any dyslexic characteristics. However, he does not achieve as he should despite his normal intelligence. He does not exhibit the amount of effort the dyslexic child does. He usually works relatively well with the teacher, but will not continue on his own. It is sometimes difficult to sustain his interest in academic work.

C. Non-English Child

The non-English child usually comes from a home where another language is spoken. Because English is not spoken, the child may experience difficulty in some English constructions, inflections, speech sounds and spellings. The child is aware that help at home is minimal and tends to become anxious when he cannot grasp something. He rarely reads the foreign language, so his fear is compounded.

D. Non standard English

This child is American born with American born parents. His idioms, sentence construction, and verbal inflections are those of the neighborhood. A problem becomes apparent when the child begins to express himself in the classroom. He is not able to shift into standard English for verb agreement, sentence construction, pronunciation, and spelling of words. The child sees no necessity to acquire and implement a dual speaking and writing form.

E. Thought Disordered

This child evinces irrelevant responses by seizing a minute detail embedded in a larger framework and builds on this extraneous foundation. He does this with a seeming consciousness of what is expected of him, but in reality, he has ignored the original intention. He seems to be academically facile and involves himself readily in content areas; however, this involvement may take tangential form and circumvent a self-directed and/or teacher goal.

The problem may become apparent in verbal or written expression when the child is unable to follow or direct a sequence of thoughts. These expressed thoughts may tend to become fragmented and lose a perceivable sense of order.

F. Achiever

This child completes assignments. His work is usually correct regardless of the grade level, and he accepts a certain amount of direction and suggestion. He is able to work alone after sufficient explanation and he can find information pertinent to his assignment. The child is average or above average in intelligence. He takes pride in his work. If he is below grade level, he will improve more rapidly than the dyslexic and non-dyslexic non-achievers. If he is on grade level, he will be able to accept higher level and less structured academic work.

CASE HISTORY OF GEORGE –
An Aggressive-Non-dyslexic/Non-achiever

Age:	15 years, 4 mos.
Born:	1/6/54
Grade:	7
Parents:	Both in home; both work
Siblings:	3 brothers (ages 5, 11, 12), 1 sister (age 9)
Health:	Excellent
Physical Appearance:	Good, strong and wiry, small for age
Reason for Referral:	Overly aggressive, extortion of money and food from classmates, history of setting fires, uncontainable in regular classes

Educational Background:

Standardized Tests:	Reading (Metropolitan Intermediate '67)	3.1
	Math (Metropolitan Intermediate '67)	3.6
	Stanford-Binet Intelligence Test '63	102 I.Q.

Anecdotal Observations:

9/62 (Teacher)	"George is not containable; he terrorizes the other children (taking money and fighting them). He will not sit at any activity."
6/63 (Teacher)	"George is still taking money from the children outside the classroom. He is truant often with no excuse or explanation. I cannot control him."
9/63	"George is transferred to another school because his family moved to an adjacent neighborhood."
10/63 (Guidance Coun).	"George has maintained contact with his gang from the other neighborhood. He uses the old school yard as a meeting place for the gang. Several fires have occurred there on week-ends; however, George and his friends deny any involvement."
10/63 (Teacher)	"George has attacked several children. The whole class sits in fear when he walks into the room. He comes late each day with no written or verbal excuse. I have referred him to the guidance counselor and contacted his mother."
11/63 (Guidance Coun).	"George was suspended for one week after his mother had been contacted. She has tried to control the boy but cannot. The child and his mother have both been referred to the Jewish Board of Guardians. His mother has called to say that George was on his way; however, he never has arrived. Mrs. F. cannot accompany him because she cannot take off from work."
12/63 (Guidance Coun).	"George was readmitted after two conferences with the boy and his mother. He seems now to understand the moral demands of school and has promised to behave himself."
3/64 (Teacher)	"George's behavior has improved with regard to the other children. However, I am concerned about his actions toward them outside the school since the children are too afraid of him to tell me anything about the walk home."
6/64 (Principal & Guidance Coun).	"Several shopkeepers have called to complain that George and his gang are stealing small items from their stores. The group was brought into the principal and questioned. They admitted going to these stores after school, but insist they pay for everything they get. They were told that the stores are off-limits for them from now on."
9/64 (Guidance Coun).	"George is placed in a new fourth grade class with a change of classmates. He definitely maintains contact with the boys with whom he was in trouble

	last year; however, the teacher does not feel she can limit his after-school contacts."
11/64 (Guidance Couns.)	"George's mother called to say that he had taken the television set and sold it. She reports that he has become unmanageable at home."
1/65 (Teacher)	"George is impossible. I cannot teach 29 other children if I must keep George in my class. Yesterday he stole my keys and threated me if I told the guidance counselor of his actions."
1/65 (Guidance Couns.)	"George has been referred to a special school for socially maladjusted boys. The waiting list is, however, very long and it is doubtful that he will be placed before next September."
3/65 (Guidance Couns.)	"Word has been received that George has been accepted for September admittance to a special school in Queens. At this time, George has been formally suspended."
4/65 (Guidance Couns.)	"George has not returned to school following his period of suspension. His mother assures me that he leaves for school each morning at 7:30 a.m."

George did not attend school for the remaining school term.

9/66 (Guidance Couns.)	George and his mother are interviewed at the new school. He returns the following day to begin the fall term at this school.
12/66 (Guidance Couns.)	"George has not been containable with the three different teachers with whom he has been placed. Next week he is going into another teacher's class even though he is a 6th grade teacher. It is possible that this teacher, because of his strength, will be able to make George respond in a more positive manner."
1/67 (Guidance Couns.)	"George and his teacher have gone through one month with success. George has no problems relating to him and follows direction from him, with minimal grumbling. George will remain with him for the rest of the year and will graduate into the regular sixth grade class.
3/67 (Guidance Couns.)	"Although George has been progressing, his relationships with the other students have not been satisfactory to either his teacher or myself since George's interaction seems to be based entirely on his power to instigate fear in other boys."

DIAGNOSTIC INFORMATION OF GEORGE

A. Gates-MacGinitie Form B.

Vocabulary — 3.3

Comprehension — 4.0

B. Wepman Auditory Discrimination Test

6 incorrect / 34 correct

C. Project Diagnostic Test

I. Alphabet (consonants)

1. Names — all correct
2. Sounds — all correct

II. Alphabet (vowels)

1. Names — all correct
2. Short sounds — all correct
3. Long sounds — all correct
4. Sound-to-symbol (short) — all correct
5. Sound-to-symbol (long) — all correct

III. Consonant Combinations (two-letter)

correct: st, cl, ch, fr, gr, tw, th, sp, sm, wh, pl, sh, dr, fl, tr, sn
incorrect: bl, sw, br

IV. Consonant Combinations (three-letter)

correct: spl (splash), thr (three), str (stray), shr (shrimp), spr (spring)
incorrect: scr (scur)

V. Silent "E" Rule

correct: not-note, win-wine, Pet-Pete, fat, cube
incorrect: fate, cub

VI. Vowel Digraphs

correct: feed, mail, card, pain, soil, road, part, seat, heel, ray, may
incorrect: beak (break), moat (meat), coin (corn)

VII. Syllabication

incorrect: substitution (subtraction)

VIII. Alphabet Reproduction

upper case: all correct
lower case: all correct

CONTENT & STRATEGY BASED ON CASE HISTORY AND DIAGNOSTIC INFORMATION OF GEORGE

222	3 4 4 2
243	7 3 1 3
333	2 1 4 4
352	1 5 1 2
323	6 2 4 2
374	7 5 1 1
423	6 4 2 4
442	7 5 1 4

(See Appendix G — Individualized Taxonomic Lesson Plan for George.)

CASE HISTORY OF ANDY –
A Combination (Aggressive-Withdrawn)-Dyslexic Child

Age: 11 years, 8 mos.

Born: September 16, 1958, New York City

Grade: 5

Parents: Living with mother; father not in home

Siblings: 1 brother: age 30; 1 sister: age 28

Health: Good

Physical Appearance: Obese; proper height for age; poorly coordinated

Reason for Referral: Erratic behavior; extremely immature; not controllable

Educational Background:

Standardized Tests: WISC Queens General Hospital 2/66

Full Scale:	83
Verbal:	72
Performance:	99

4/65 Referral to hospital: immature, erratic behavior
psychiatric services: speech problems

Speech evaluation 1967: Andy was cooperative though restless; mild to moderate articulation defect noted.
Inconsistent substitutions.
Distortions, lateral emissions and omissions of final consonants.

Prognosis: Andy's speech defects can be corrected with maximum stimulation.
His articulatory problems are for the most part, caused by missing maxillary lateral incisors and a slightly open bite.

Bender-Gestalt 1966: Andy's verbal ability is inferior to his nonverbal ability.
Very loose association of thought processes.
Difficulty in abstraction.
A tendancy for concern for destruction.
Behavioral difficulty is primarily psychogenic.

Therapy once a month – mother is highly cooperative.

Hospital report: Confused concrete thinking.
Incoherent abstract thinking.
Speech handicap.
Poor concept formation and body image
(confused sexual identity)

Recommendation: Continued therapy.
Drug treatment.
Counseling for mother.

Anecdotal Observations:

10/64 (Teacher) "After having Andy in my 1st grade class for two months, I don't feel as if I know him at all. He seems to be looking for attention and love; however, he uses none of the ploys that the other children do. I try to get next to him, but I have no success."

5/65 (Teacher) "Andy and I are not a working team. I can't seem to get through to him. He is not aware of the alphabet at all and has little concept of numbers. He cannot tell time, I hesitate to retain him; he may be able to work better with someone else."

11/65 (Teacher)	"I have referred Andy to the guidance counselor because I do not understand him. Since he has been in my class, he has developed an odd speech pattern. I tried to correct some of the more obvious errors, but he looks straight at me and says the word or sounds the way he did originally."
12/65 (Guidance Couns.)	"Andy is a strange child. We had a conference in my office; Andy was obedient and listened carefully but he was so restless I thought he would crawl under the chair. I have referred him to the General Hospital nearby for a routine psychological work-up and also a speech examination."
2/66 (Guidance Couns.)	"The reports have been completed by the hospital. Andy registered a dull-normal score on the intelligence test; however, it is the feeling of the examiner and myself that Andy's extreme restlessness in these situations caused some of that score. We will try to test him in a less frightening, less structured environment. Andy's mother has been extremely cooperative and wishes to do anything to help us help Andy."

No follow-up prior to this date.

9/66 (Teacher)	"Andy has learned nothing in my class. Since the beginning of the term (three weeks), Andy has been eating voraciously. He even begs food from the other children. He brings his lunch every day and usually a dime with which he buys the sweetest thing he can. He has gained about ten pounds in two weeks. I have notified the school nurse."
10/66 (School Nurse)	"Andy came to see me at his teacher's request. I asked him what he eats for breakfast and he told me of a full, well-balanced diet each morning. He told me that he brings his lunch each day but that it is not enough. He eats dinner with his mother after she gets home from work and his mother buys him an ice cream cone each night after dinner. He also mentioned that he and his mother share the same room. The school doctor will check Andy with the other children in November."

No follow-up from school doctor.

12/66 (Teacher)	"Andy has become more difficult to handle lately. He has been coming in each morning with several candy bars. (I don't know how he comes by them). He seems to be living in his own dream world. He does not even apply himself to the work any more. He cannot read, tell time, or recognize numbers. The remedial reading teacher said she cannot take Andy at this time."
4/67 (Teacher)	"Andy has become a demon in a matter of months. His behavior goes from quiet and introverted to completely uncontrolled periods where he seems not to be himself. I find myself ignoring the other children so that Andy will not become air-borne. In spite of the amount of time I devote to him, he has learned nothing this year. I am referring him to the guidance counselor."
6/67 (Guidance Couns.)	"I have referred Andy for placement in a special school for emotionally disturbed boys. I have done this only after conferring with the hospital that tested him and each of his teachers."
6/67 (Guidance Couns.)	"I have received word that Andy cannot be admitted to the special school until June of next year. We will try to maintain him here with as many extra services as possible. The remedial reading teacher has promised me that she will begin work with Andy in September. He will also be seen by the school psychologist."
9/67 (Teacher)	"Andy is in my class approximately three quarters of the school week. He has behaved himself and has made two friends in the class. The other children tease him about his obesity and inability to read, however, he tries very hard to contain himself."
4/68 (Teacher)	"Conditions have gotten much worse this term. The children manage to tease and taunt Andy unmercifully regardless of my efforts to stop it. He has struck

	out several times and I fear that he will hurt some of the smaller children because he is so much taller, heavier, and stronger than they. They fully deserve his wrath since on no occasion, has he initiated the trouble. I feel that Andy and the class would be much happier if they were separated."
5/68 (Teacher)	"Because Andy is experiencing such misery over which he has no control, I am recommending to Andy's mother that he be kept at home and tutored by a visiting teacher. If this keeps up, he will be in no condition to make the necessary adjustments to the special school in September."
5/68-6/68 (Teacher)	"Andy remained at home and was tutored for the month and a half."

DIAGNOSTIC INFORMATION OF ANDY

A. Gates-MacGinitie Form B.

Vocabulary – 1.4

Comprehension – No Score

B. Wepman Auditory Discrimination Test

10 incorrect / 30 correct

C. Project Diagnostic

I. Alphabet (Consonants)

1. Names

correct: l, b, t, c, n, y, r, d, h, j, s, m, p
incorrect: k, v, z, f, g, w

2. Sounds

incorrect: l, c, k, v, n, r, z, f, g, h, j, s, w, m
correct: b, t, d, p, y

II. Vowels

1. Names

correct: a, e, o
incorrect: i, u

2. Short sounds – all incorrect

3. Long sounds – all incorrect

4. Sound-to-symbol (short) – all incorrect

5. Sound-to-symbol (long) – all incorrect

III. Consonant Combinations (two-letter) – all incorrect

IV. Consonant Combinations (three-letter) – all incorrect

V. Silent "E" Rule – all incorrect

VI. Vowel Digraphs – all incorrect

VII. Syllabication – all incorrect

VIII. Reproduction of Alphabet

Upper case:

correct: A, B, D, E, F, G, H, P, Q
incorrect: C, I, J, K, L, M, N, O, R, S, T, U, V, W, X, Y, Z

Lower case:

correct: a, b, c, d, e, g, h, i
no attempt at others

CONTENT & STRATEGY BASED ON CASE HISTORY AND DIAGNOSTIC INFORMATION OF ANDY

111	3 4 1 2
131	7 5 4 3
121	3 6 2 2
211	3 6 4 4
221	3 4 1 2
231	2 1 4 4
311	1 4 2 2
341	2 4 4 4

(See Appendix H– Individualized Taxonomic Lesson Plan for Andy)

CASE HISTORY OF EDWARD –
A Withdrawn – Non-dyslexic/Non-achiever

Age: 11 years, 3 mos.

Born: 3/31/58, New York City

Grade: 5

Parents: Mother in home; father is not, but visits

Siblings: 4 older children; 5 younger children

Health: Fair to good

Physical Appearance: Tall for age, painfully thin

Reason for Referral: Sudden overt aggression. not containable

Educational Background:

11/63 (Teacher) "First year of school. Edward is shy and introverted, he has few friends; when the question is asked directly, he answers in a whisper."

6/64 (Teacher) "Edward has not progressed the way the other children have. He does the work I give him but he seems to be so tired and weary all the time."

10/64 (Teacher) "Edward is extremely quiet. It takes much urging to get him to do anything, although he never minds doing things in the class. Edward has no concept of letters and numbers."

5/65 (Teacher) "Edward has not learned ANY numbers or letters and he becomes very tense when I show him anything with letters. He has far too many accidents in the class. Something is always happening to him. He has no friends at all."

9/65 (Guid. Couns.) "Routine tests introduced me to Edward. He showed up very poorly on all of his tests with the exception of visual memory where he seemed to have a photographic memory. I tested him with more pictures and symbols and words and he was able to repeat the order, design, and context perfectly each time. In other tests (digit span, motor coordination, reading, and math) he showed up in the lowest percentile. His I.Q. is 92 so that we know he is not retarded, however, a good deal of his functioning is like that of a retarded child. I have recommended counseling for the entire family and Junior Guidance for Edward."

11/65 (Jr. Guid. Teacher) "Edward was very introverted when he came into my class. He made friends with one boy his age after the other child had made it apparent that he wanted Edward's friendship. He is having a great many accidents. He has fallen several times and cut himself, usually around the head. He tries to be careful, but if there is some way he can fall or hit himself, he manages to do it."

3/66 (Jr. Guid. Teacher) "Edward has made virtually no progress in reading and math. His social contacts have slacked completely since his one friend was transferred back to regular class. His mother came to school last week and told me has become enuretic again. He is very sensitive about this since his grandmother, who raised him for five years, made him sleep on the floor because he wet the bed. Edward had one accident in the class and locked himself in the bathroom for 20 minutes.

Edward's general accidents have not subsided and one was so serious two weeks ago that Edward was taken to the hospital. He sprained his wrist while catching it in the desk."

5/66 (Jr. Guid. Teacher)	"Edward has not yet mastered the rudiments of beginning reading and we feel it would be unfair to Edward to promote him to a more difficult level. Since the Junior Guidance teacher has a small class for the coming year, Edward will remain with her at this grade level in hopes of bringing him up to standard."
10/66 (Jr. Guid. Teacher)	"Edward has made a remarkable improvement in his ability to address himself to the discipline of beginning reading. His math is better, also. His social contacts are still negligible; he has become friendly with one of the most aggressive boys in the class and I have a feeling that the other child is using Edward to do things for him."
2/67 (Jr. Guid. Teacher)	"Edward has slipped in behavior. He has become very aggressive and I have difficulty controlling him. His association with Andy has become so strong that he listens to no one except Andy. However, Andy will be transferred at the end of this week so something should come about in Edward's behavior after that."
3/67 (Jr. Guid. Teacher)	"Edward has become more aggressive since Andy's removal. Instead of becoming less agressive because Andy is not here to back him up, he seems to feel that Andy's place is now his through default. He listens to no one; has begun coming late to school; disappears from the classroom; and has lost all interest in his school work. I cannot tend to the other children if Edward is in the room."
6/67 (Guid. Couns.)	"Edward is being recommended for a special school. His Junior Guidance teacher and I feel that he will benefit more from placement in a class for emotionally disturbed-socially maladjusted children. The special school will be in a position to offer Edward more of what he needs. I have been in touch with a school in Queens that may have room for him in a new fifth grade class. Edward and his mother are going to the school for an interview this week so that he may begin immediately for the fall term." Edward has been accepted for the fall term at the special school. He will be in a class with eleven other boys whose problems are similar to his and where there is more attention paid to reading remediation."

DIAGNOSTIC INFORMATION OF EDWARD

A. Gates-MacGinitie Form B.

Vocabulary – 1.3

Comprehension – 1.6

B. Wepman Auditory Discrimination Test

8 incorrect / 32 correct

C. Project Diagnostic

I. Alphabet (consonants)

1. Names – all correct

2. Sounds –

correct: l, b, t, c, k, v, r, f, g, h, j, s, m
incorrect: n, y, d, p

II. Alphabet (vowels)

1. Names – all correct

2. Sounds (short) – all incorrect

3. Sounds (long) – all correct

4. Sound-to-symbol (short) – all incorrect

5. Sound-to-symbol (long) – all correct

III. Consonant Combinations (two-letter)

correct: sh, st
incorrect: cl, ch, fr, gr, tw, th, sm, wh, pl, bl, sw, br, dr, fl, tr, sn, sp

IV. Consonant Combinations (three-letter)

all incorrect

V. Silent "E" Rule

correct: not
incorrect: note, fat-fate, cub-cube, pet-Pete, win-wine

VI. Vowel Digraphs

all incorrect

VII. Syllabication

all incorrect

VIII. Reproduction of Alphabet

Upper case –

correct: A, B, C, D, E, F, G, Q, R, S, T, U
incorrect: O, P, H, I, V, M, N, K, W, X, Y, Z

Lower case –

correct: a, c, d, e, f, g, h
incorrect: b, i, j, k, l, m, n, o, p, q, r, s, t, u, v, w, x, y, z

CONTENT & STRATEGY BASED ON CASE HISTORY AND DIAGNOSTIC INFORMATION OF EDWARD

111	2 2 1 3
151	6 5 1 4
131	2 4 4 3
211	6 4 4 3
221	1 6 2 3
231	1 4 4 4
311	1 4 2 2
341	2 3 4 2
371	1 5 2 1

(See Appendix I – Individualized Taxonomic Lesson Plan for Edward)

WHAT INITIAL Rx WOULD YOU PRESCRIBE FOR THE FOLLOWING CHILDREN?

1

Robert is in the fifth grade, but is reading on the second grade level. His glasses are quite thick. Robert does not like to read. His teacher has found, quite by accident, that Robert likes to listen to stories read to the class. Whenever Robert is forced to read aloud, he starts to "act-up" and becomes a problem.

2

Andrew often leaves his seat and disturbs the other students who are trying to work. He dislikes books of all sorts and would rather play games than do anything else. He likes to talk about himself and to move about the classroom. He cannot be seated for a long time.

3

John comes to school each day; yet he is truant in the halls. It seems impossible to contain him in a classroom. In the first month of school, he exhibited an interest in football. A sixth grader, he reads on a high first grade level. He is extremely sensitive about his reading.

4

Howard is a seventh grader with extreme identity problems. He reads on a high fifth grade level and can be a good student. However, he often finds himself in conflict with his peers. His former teachers have been women and his adjustment to a male teacher has not been easy for him or his teacher. It is obvious he functions more easily with women. Ideally, Howard should be able to tackle any work in the room. Yet, he maintains he cannot do the work.

5

Kevin is a fifth grader. He was retained after his first semester in a special school since it was felt that he was not prepared for the sixth grade. In three semesters, he has had three teachers. The second teacher created havoc with the class. While all the children suffered during the semester, Kevin fared worst. He is a highly sensitive child who requires an abnormal amount of attention. He is reading on a first grade level. Kevin is excellent in art and tends to express himself this way.

6

Ricardo has been in the special service school for three years. He is now a seventh grader. As a fifth grade student, he had no knowledge of the alphabet. Through the intensive efforts of both Ricardo and his teacher, he is now reading on a fifth grade level. This year he was placed in a class with several boys who are serious problems in and out of school. It will be necessary to occupy Ricardo with work so that he does not follow the example of these boys.

7

Carlos is a good boy. Everyone in the school enjoys him. While he is an average eighth grade student, he scores a 4.0 level in reading. Carlos tends to fool around because he knows everyone is aware he can do better. He does not seem to realize that a high school of 3,000 will not have time to cajole him into doing better and trying harder. He has said he wants to be a television repairman or electrician's helper. He has no idea of job requirements or responsibilities.

8

Peter is an excellent student when he comes to school; however, he seems to have his mind on problems at home. He is a seventh grader reading on a middle third grade level. When he helps at home, he watches television. He can recall the names of all daytime shows. He has no word attack powers; he can blend no sounds.

9

Richard is a charming child. In the sixth grade, he cannot memorize sight words. His teacher has tried all memory tricks, but nothing seems to work. He has had Richard write the words on the board, colored paper, and an overhead projector – nothing has worked. After two months, Richard is becoming increasingly frustrated.

GIVE A TAXONOMIC ℞ FOR THE FOLLOWING MATERIAL DESCRIPTIONS.

1

A ten minute tape teaching the initial sound of the letter "b."

TAX ID ________ ________ ________ ________ ________ ________ ________

2

A short story of high interest content read silently.

TAX ID ________ ________ ________ ________ ________ ________ ________

3

A ten minute teacher presentation to the entire class on the definition and function of the noun.

TAX ID ________ ________ ________ ________ ________ ________ ________

4

A child is working with a Tach-X and is receiving a one second exposure of words and phrases. He is told to write down what he has seen on the screen.

TAX ID ________ ________ ________ ________ ________ ________ ________

5

Two children playing the junior scrabble game.

TAX ID ________ ________ ________ ________ ________ ________ ________

6

An entire class rehearsing lines from a play. The script was provided by the teachers.

TAX ID ________ ________ ________ ________ ________ ________ ________

7

Two boys listen to a taped story. Afterwards the teacher asks them what the sequence of the story was, i.e., what happened first, second, etc.

TAX ID ________ ________ ________ ________ ________ ________ ________

8

A student listens to a tape. Instructions on the tape ask for specific directions to be followed.

TAX ID ________ ________ ________ ________ ________ ________ ________

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GLOSSARY

GLOSSARY

AESTHETIC EXPRESSION (Basic Skill 5): the interpretive skill necessary for the reception of any sensory input, either verbal or non-verbal, which contains a cultural expectation; the output of a structured expressive content which fulfills the unique expectations of the creator and which elicits effective responsiveness; the use of the interpretive and expressive skills as a nontraditional method of teaching reading to alienated youth.

AUDITORY (Communication Input 2): the stimulation of the sensory system of hearing through which information is transmitted to the student.

AUDITORY-KINESTHETIC (Communication Input 6): the stimulation of the sensory systems, hearing and body movement, through which information is transmitted to the student.

AUDITORY-VISUAL (Communication Input 4): the stimulation of the sensory systems, hearing and vision, through which information is transmitted to the student.

BASIC SKILLS: those areas of study (see the Taxonomy Appendix A) that can be used to describe reading behavior; the terms can be used descriptively to diagnose the student's reading proficiency, prescriptively to remediate the student's reading deficiencies, and to catalogue the functions of instructional materials.

BASIC SUBSKILLS: those components of the basic areas of reading that are used for greater specification in describing reading behavior.

COGNITIVE-PERCEPTUAL (Basic Skill 1): the process by which the child develops structured, integrated intellective patterns, thereby stabilizing his view of the immediate environment and the world; as the channels of input interact with the total sensory system, they become ordered in a priority scheme in which seeing and hearing become the primary means of communciation.

COMMON DISABILITY: that academic or social deficiency which two or more individuals share.

COMMUNICATION INPUT: the student's sensory channel selected by the teacher for transmission of information.

COMMUNICATION OUTPUT: the channel of expression selected by the teacher and utilized by the student to communicate a response.

COMPREHENSION (Basic Skill 3): the process of determining meaning from verbal and nonverbal cues by reference to internalized constellations of content acquired through sensory and cognitive experience.

CONSONANTS (Subskill 1 of Language Analysis Basic Skill 2): all letters of the alphabet and their respective sounds except a, e, i, o, and u.

CONSONANT BLENDS (Subskill 1 of Language Analysis Basic Skill 2): the combination of two consonant sounds which keep their individual sounds but which blend into one another, e.g., "bl" as in the word "blend."

CONSONANT DIGRAPHS (Subskill 1 of Language Analysis Basic Skill 2): the combination of two consonant sounds that lose their individual sounds and become a unified sound, e.g., "th" as in the word "the."

CONTEXT INFERENCE (Subskill 5 of Comprehension Basic Skill 3): the ability to formulate and internalize a body of content that is not specifically stated, but which is postulated or inferred.

CREATION (Subskill 3 of Aesthetic Expression Basic Skill 5): the act of bringing into existence that which has not existed before, based on the experiential background of the child.

CRITICAL ANALYSIS (Subskill 6 of Comprehension Basic Skill 3): the evaluation of information, ideas and opinions contained in reading materials or discussions based on personal values, previous experiences, and knowledge.

DEMONSTRATIONS (Step Three of Taxonomic Procedure): field testing by researcher of individual prescriptions within classroom or, if need be, outside of classroom.

DETAILS (Subskill 2 of Comprehension Basic Skill 3): the selection of specific and particular information from a larger body of content.

DICTIONARY (Subskill 2 of Study Skills Basic Skill 4): the utilization of the dictionary for purposes of locating and pronouncing words, syllabicating, learning the use of stress, diacritical marks and syntax, and selecting appropriate meaning from the list of definitions.

DIRECTIONALITY-LATERALITY (Subskill 3 of Cognitive-Perceptual Basic Skill 1): directionality – the precise left-right linear eye movements and the return diagonal movements that are required for reading and that preclude any tendency toward reversals; laterality – the preferential use of one side of the body.

EMOTIONAL DISTURBANCE – SOCIAL MALADJUSTMENT: that child who, for behavioral reasons, cannot be contained with even minimal instruction in a "normal" classroom. Such children are descriptively categorized in terms of exhibited classroom behavior rather than by pathological labeling.

EVALUATION (Step Four of Taxonomic Procedure): analysis of the effectiveness of remediation based on observation of student behavior in the classroom and teacher feedback.

EXAMINATION (Step Six of Taxonomic Procedure): search through the reservoir of content and strategies for a "goodness of fit" for each child.

EXPLORATION (Instructional Mode 5): that style of presentation which requires the child to refer to other sources of information or to his own realm of experience.

GRADES TWO AND BELOW (Sequential Level 1): an instructional range for reading that encompasses readiness skills up to and including the second grade.

GRADES TWO TO FOUR (Sequential Level 2): an instructional range that encompasses reading skills the child is expected to acquire between the second grade and the completion of the fourth grade.

GRADES FOUR TO SIX (Sequential Level 3): an instructional range for reading that encompasses readiness skills up to and including the sixth grade.

GRADES SIX AND ABOVE (Sequential Level 4): the assignment to this grade range of those reading skills that are acquired during the upper elementary and secondary school years.

IDENTIFICATION OF THE PROBLEM (Step One of Taxonomic Procedure): diagnosis through testing, individual and group, formal and informal; description of child in terms of test results.

INDIVIDUAL SELF-INSTRUCTION (Instructional Method 7): a setting in which the student is personally involved in instructing himself and in which he sets his own pace for learning.

INSTRUCTIONAL MODE: types of formats and styles that provide the students with a varied presentation of materials.

INSTRUCTIONAL METHOD: classroom groupings that provide the child with various instructional settings.

INTERPRETATION (Subskill 2 of Aesthetic Expression Basic Skill 5): the bringing forth of meaning from works in all the media of the communication arts, based on one's own experiential background.

INDIVIDUALIZATION: that process by which the teacher, through diagnostic and evaluative procedures, pinpoints the combination of skills and methods of presentation which are uniquely motivating for a particular child in a specific environment and specific time.

KINESTHETIC (Communication Input 3): stimulation of the sensory system which transmits the sensation of movement or tension in muscles, joints and tendons.

LANGUAGE ANALYSIS (Basic Skill 2): an examination of all the elements of language, from minimal to larger units, and the synthesis of those units into meaningful contexts to develop language competency.

MAIN IDEAS (Subskill 1 of Comprehension Basic Skill 3): the development of the ability to select the most important data from a body of content.

MAPS, GRAPHS, AND TABLES (Subskill 4 of Study Skill Basic Skill 4): the ability to decipher the symbols that facilitate the reading and construction of maps, graphs, and tables.

MEMORY SPAN (Subskill 2 of Cognitive-Perceptual Basic Skill 1): the ability to retain a cohesive unit of input, either in meaningful context or by "rote," which will ultimately be expressed as a verbal or motoric response.

MOTIVATION: short term – the utilization of the setting, format and communication channel, or any combination of these, which stimulates the child to use his strengths to involve himself in the task; long range – the child, having achieved success through short term motivation, then becomes self-directed.

MOTORIC (Communication Output 3): a written answer or bodily movement that is given the student in response to a stimulus.

MULTILEVEL (Sequential Level 6): that skill activity or material that may be appropriate to many grade levels.

NO RESPONSE (Communication Output 1): an intrinsic reaction to a stimulus which is not visible to the observer.

ONGOING DIAGNOSIS: The systematic observation of the child's reaction over time to the various dimensions of the taxonomy for the purpose of determining the strengths and weaknesses of his learning behaviors.

ORAL (Communication Output 2): an answer that is given vocally to a stimulus.

ORAL-MOTORIC (Communication Output 4): a written, vocal or kinesthetic response that is given by the student to a stimulus.

OTHER SOURCES AND PROCESSES (Subskill 6 of Study Skills Basic Skill 4): those unique subskills within the range of study skills, utilized infrequently by our population, and therefore not specifically listed in the taxonomy.

PERSONALIZATION (Step Seven of Taxonomic Procedure): after individualization has been achieved, the child is exposed to settings, modes, inputs and outputs that force him to use his strengths to decrease his weaknesses. It is a process by which the child becomes less sensitive to frustrations generated in learning situations.

PLAY-CHANCE (Instructional Mode 1): the manner of instruction in which the element of chance is emphasized, e.g., instructional games where every player has an equal chance regardless of his skills.

PLAY-COMPETITION (Instructional Mode 2): the manner of instruction in which the element of competition is stressed, e.g., instructional games where the students are required to pit their skills against each other.

PLAY-PUZZLE (Instructional Mode 3): an instructional format which presents the student with a problem that can be worked out by means of the student's skills and is particulary adaptable for use in self-instruction.

POST TESTING (Step Eight of Taxonomic Procedure): means by which the child's growth can be assessed.

PROBLEM SOLVING (Instructional Mode 7): presentation of a problem situation requiring the student to arrive at the appropriate answer through any means of reasoning.

PROGRAMMED RESPONSE (Instructional Mode 6): the presentation of material in which exposition is extensive, the sequential learning steps are small, the student receives immediate feedback as to the appropriateness of his response: the student is expected to participate in this type of format by himself.

RANGE OF ABILITY: the recognized span of competencies of each individual in the population.

RECEPTION (Subskill 3 of Aesthetic Expression Basic Skill 5): the exposure of students to works in the media of communication arts for the purpose of developing sensitivity to content that contains cultural values

RECREATIONAL READING (Subskill 7 of Comprehension Basic Skill 3): reading for personal pleasure, which as a secondary factor, hopefully reinforces any and all comprehensive skills.

REFERENCES AND TEXTS (Subskill 3 of Study Skills Basic Skill 4): those materials in specific content areas which are used to locate information in order to evaluate, organize and use needed data.

REFINEMENT (Step Five of Taxonomic Procedure): more definitive description of child in terms of his revealed strengths and weaknesses.

SENSORIALLY DEPRIVED: the absence of functioning, malfunctioning or depressed functioning of one or more sensory channels necessary to the learning process.

SENSORIALLY INVOLVED: the integration and implementation of those senses essential to the learning process.

SEQUENTIAL LEVELS: the expected grade at which a skill would be attained or presented in a public school.

SEQUENCE-RELATIONSHIPS (Subskill 3 of Comprehension Basic Skill 3): the ability to place specific information (using recall) in appropriate temporal and spatial order.

SIGHT VOCABULARY (Subskill 3 of Language Analysis Basic Skill 2): those words whose retrieval is immediate because extended language analysis skills are no longer required; an ever expanding reservoir of rapidly recalled words.

SKIMMING (Subskill 1 of Study Skills Basic Skill 4): a rapid and superficial reading in order to get either a total impression or to locate specific information.

SPACE RELATIONSHIPS (Subskill 5 of Cognitive-Perceptual Basic Skill 1): the recognition of the various dimensions of space and a discrimination of the placement of objects within these dimensions.

SPEED AND ACCURACY (Subskill 5 of Study Skills Basic Skill 4): the ability to cope with the variable of speed while maintaining accuracy in comprehension.

STUDENT-SMALL GROUP (Instructional Method 5): a setting in which a student (acting as leader) is instructing or organizing a part of the class.

STUDENT-STUDENT (Instructional Method 6): an instructional setting whereby a one-to-one purposeful relationship exists between two students; the students can be paired with equal or unequal skills depending on the goals of the teacher.

STUDENT-TOTAL GROUP (Instructional Method 4): a setting in which a student (acting as leader) is instructing and organizing the rest of the class.

STUDY SKILLS (Basic Skill 4): those tools which are taught by the teacher and used by the child to facilitate self-instruction and which are prerequisite for higher level independent inquiry.

SYMBOLIC DISCRIMINATION (Subskill 1 of Cognitive Perceptual Basic Skill 1): the ability to relate a symbol representation of an object, grapheme or idea, to the meaning of its original referrant and to find similarities, differences and equivalencies among representative communication inputs (requiring a feedback in its initial stages).

STRATEGY: the unique plan incorporating the last four numbers of the Taxonomy (Instructional Method, Instructional Mode, Communication Input, Communication Output) that is conveyed by a material to totally involve the child in the task. Strategy should be thought of in terms of motivation. The motivational factor may proceed from any one of the four components, from the material itself, or from something extrinsic that is added, e.g., M & M's, a hand on the shoulder, etc.

SYNTAX (Subskill 5 of Language Analysis Basic Skill 2): language elements above word level that are ordered to construct more expanded language units (phases, clauses and sentences); the selected order conveys a total meaning that is beyond the sum of the individual word meanings of the construction.

TAXONOMIC INSTRUCTION: the implementation of that classification of reading skills employed by the teacher and students in the course of reading instruction.

TAXONOMY: the classification and arrangement of all those skills pertinent to reading and related content areas.

TEACHER-SMALL GROUP (Instructional Method 2): a setting in which the teacher is instructing a part of the class; the small group is usually not more than six students.

TEACHER-STUDENT (Instructional Method 3): a one-to-one relationship for instruction between teacher and student.

TEACHER-TOTAL GROUP (Instructional Method 1): a setting in which the teacher instructs a total group.

TEAMWORK FOR INDIVIDUALIZATION (Step Two of Taxonomic Procedure): procedure between teacher and researcher to develop long range lesson plans and individual prescriptions.

TEST-RESPONSE (Instructional Mode 4): a specific response required for a particular stimulus by means of which the teacher determines whether the child has learned the information that has been imparted.

TIME RELATIONSHIPS (Subskill 4 of Cognitive-Perceptual Basic Skill 1): the sequencing of actions or events in the order of their occurrence.

UNGRADABLE (Sequential Level 5): a designation of skill requirement assigned to an activity or material which does not fall within any explicit grade level.

VISUAL (Communication Input 1): pertaining to the sensory input of sight (vision); the stimulation of the sensory system of the eyes through which visual information is transmitted to the student.

VISUAL-AUDITORY-KINESTHETIC (Communication Input 7): the stimulation of the three sensory systems required to transmit visual, aural and self-movement information to the child.

VISUAL-KINESTHETIC (Communication Input 5): transmission of sensory input(s) through the eyes and bodily movement of the student; the stimulation of the two sensory systems required to transmit visual and self-movement information to the child.

VOWELS (Subskill 2 of Language Analysis Basic Skill 2): the letters a, e, i, o, u, and sometimes y and their respective sounds.

VOWEL DIPTHONG (Subskill 2 of Language Analysis Basic Skill 2): any vowel combination in which the vowels that make the combination lose their distinctive sound and become one speech sound, e.g., "OY" as in the word "toy."

WORD MEANING (Subskill 4 of Comprehension Basic Skill 3): the development of the ability to select one of several meanings of a particular word used in a particular context.

WORD STRUCTURE (Subskill 4 of Language Analysis Basic Skill 2): language elements (roots, suffixes and prefixes) that carry meaning and that can be lawfully combined in prescribed ways to create more extended language units on the word level.

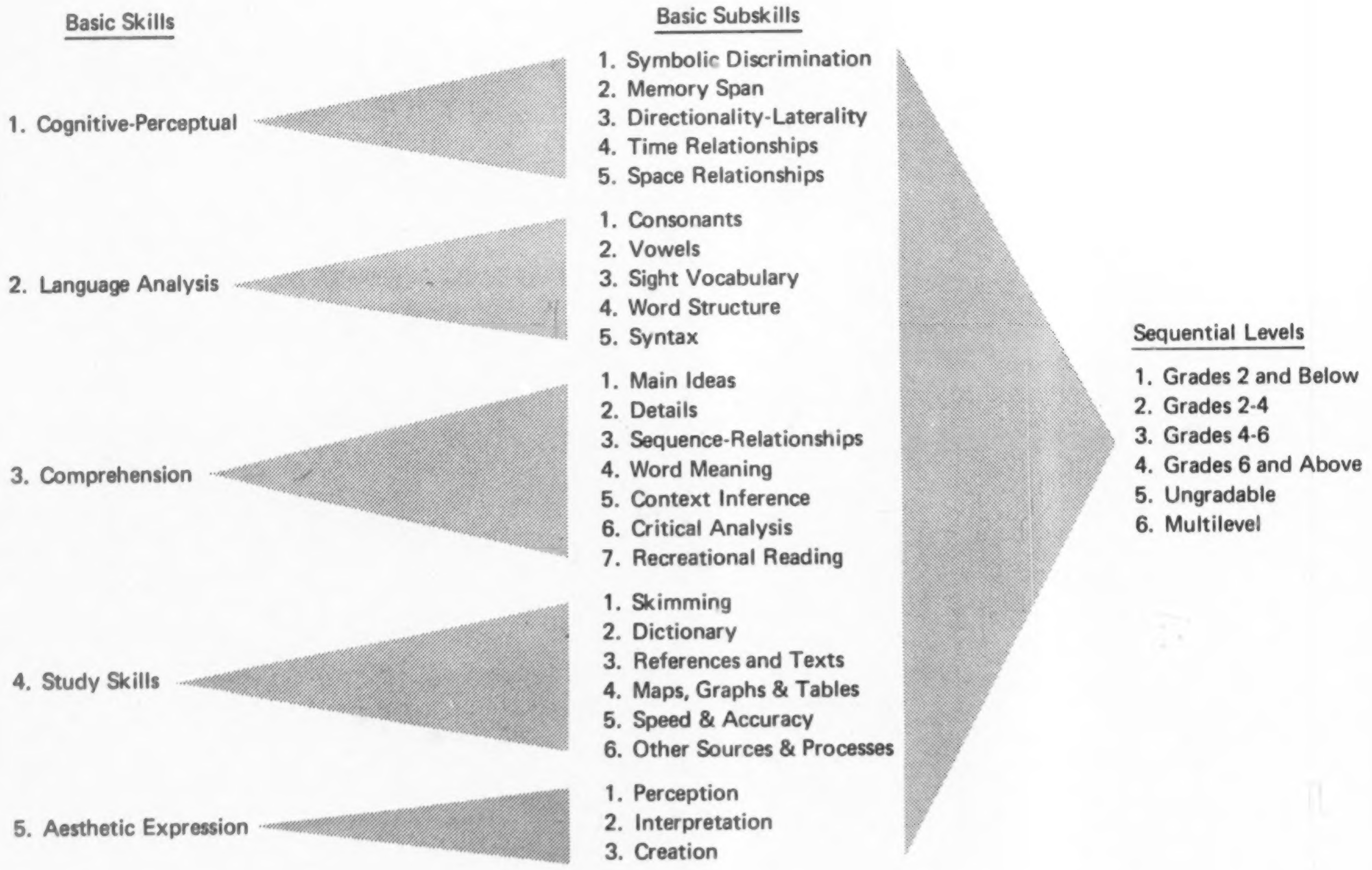
GENERAL APPENDICES

APPENDIX A

RESEARCH AND DEMONSTRATION CENTER — TAXONOMIC INSTRUCTION PROJECT — TEACHERS COLLEGE, COLUMBIA UNIV.

THE TAXONOMY

THE WHAT OF INSTRUCTION



Basic Skills

1. Cognitive-Perceptual
2. Language Analysis
3. Comprehension
4. Study Skills
5. Aesthetic Expression

Basic Subskills

1. Symbolic Discrimination
2. Memory Span
3. Directionality-Laterality
4. Time Relationships
5. Space Relationships

1. Consonants
2. Vowels
3. Sight Vocabulary
4. Word Structure
5. Syntax

1. Main Ideas
2. Details
3. Sequence-Relationships
4. Word Meaning
5. Context Inference
6. Critical Analysis
7. Recreational Reading

1. Skimming
2. Dictionary
3. References and Texts
4. Maps, Graphs & Tables
5. Speed & Accuracy
6. Other Sources & Processes

1. Perception
2. Interpretation
3. Creation

Sequential Levels

1. Grades 2 and Below
2. Grades 2-4
3. Grades 4-6
4. Grades 6 and Above
5. Ungradable
6. Multilevel

APPENDIX A

RESEARCH AND DEMONSTRATION CENTER TAXONOMIC INSTRUCTION PROJECT TEACHERS COLLEGE, COLUMBIA UNIV.

THE HOW OF INSTRUCTION

Instructional Method	Instructional Mode	Communication Input	Communication Output
1. Teacher-Total Group	1. Play-Chance	1. Visual	1. No Response
2. Teacher-Small Group	2. Play-Competition	*2. Auditory	2. Oral Response
3. Teacher-Student	3. Play-Puzzle	3. Kinesthetic	3. Motoric Response
4. Student-Total Group	4. Test-Response	*4. Auditory-Visual	4. Oral-Motoric Response
5. Student-Small Group	5. Exploration	5. Visual-Kinesthetic	
6. Student-Student	6. Programmed Response	6. Auditory-Kinesthetic	
7. Individual Self-Instruction	7. Problem Solving	7. Visual-Auditory-Kinesthetic	

*A distinction between extrinsic and intrinsic auditory input is being made. Whenever the purpose is a self-monitoring auditory input, the letter "I" will follow the appropriate number.

APPENDIX B

CLASSROOM OBSERVATION ANALYSIS SHEET

Class ____________________ Teacher ______________________ Observer ______________

Date ____________________ Period ______________________ Time _________ to _____

	Taxonomy								Pupils Observed															
ITEMS	Basic Skills	Sub Skills	Seq. Level	Methods	Modes	Comm. Input	Comm. Output	TIME																TIME
								2																2
								4																4
								6																6
								8																8
								10																10
								12																12
								14																14
								16																16
								18																18
								20																20
								22																22
								24																24
								26																26
								28																28
								30																30

$$\text{Participation Ratio (PR)} = \frac{\text{Participation Time}}{\text{Total Time of Observation}}$$

Key
Item # = Participation
R = Random Behavior
(N?) = Ambiguous Behavior
N = Nonparticipation
T = Transition Between Tasks
X = Pupil's Attendance
Circled Item # = Academic Digression

APPENDIX B

THE OBSERVATION PROCEDURE

Explanation of Key

This observation procedure should be used only if a planned lesson is in progress.

1. PARTICIPATION: Behavior that indicates student involvement in the task that has been assigned. Participation is recorded as a taxonomic *item* number in the appropriate interval boxes of the observation sheet.

2. NONPARTICIPATION: Overt behavior that indicates the student has removed himself from the assigned task: sleeping, doodling, talking, etc. Nonparticipation is recorded as the letter N in the appropriate interval boxes of the observation sheet.

3. RANDOM BEHAVIOR: Behavior that indicates nonparticipation of the student as manifested by walking around the room. Random behavior is recorded as an R in the appropriate interval boxes of the observation sheet.

4. TRANSITION: Nonparticipation of student caused by termination of one task and the transition to another. This type of behavior is to be recorded as a T in the appropriate interval boxes of the observation sheet.

5. PUPIL'S ABSENCE: Absence from the room during observation is to be recorded as an X in the appropriate interval boxes of the observation sheet.

6. AMBIGUOUS BEHAVIOR: If the student's behavior is ambiguous, mark the interval with the symbol that is most relevant, but designate the beginning of ambiguity by a question mark. Continue the use of this symbol as long as the ambiguity exists. If the observer's hypothesis is disproved, re-mark the ambiguous intervals with the appropriate symbol. For example, if the observer tentatively assesses the child's academic behavior as manifesting nonparticipation, an N with a small question mark (N?) is to be recorded in the appropriate interval box.

   If ambiguity of behavior is not resolved, the tentative assessment is to remain on the record.

7. ACADEMIC DIGRESSION: Academic digression on the part of the child is viewed as a self-initiated activity that is relevant to the task that has been assigned. A different item number should be assigned to the academic digression and when recorded in the interval box, the item number should be circled: (②).

APPENDIX C

Catalogue Card

CF (Cross-file)

Material Identification:

Publisher:

Description:

Method	Mode	Input	Output	Material Source	

APPENDIX D

ROLE DEFINITIONS

Five Diagnosticians – in-service teacher trainers with competencies in the following areas: remedial reading, speech therapy and language development, curriculum development, linguistics, and the nature and needs of the emotionally disturbed, neurologically impaired and mentally retarded.

A. Diagnostician – in-service teacher trainer – remedial reading competency

SPECIFIC RESPONSIBILITIES

1. To select test instruments
2. To offer instruction in standardized test administration procedures
3. To collect pre- and post- data and to secure accurate scoring of tests
4. To act as consultant to in-service trainers in the analysis of test results and the diagnoses of reading deficits
5. To assist in the development of sequences of skills for each child
6. To assume the responsibility for on-going testing to assess the progress of individual children
7. To isolate those children with visual-motor perceptual problems and to initiate a remedial program for these deficiencies

B. Diagnostician – in-service teacher trainer – competency in speech and language development

SPECIFIC RESPONSIBILITIES

1. To isolate from initial diagnostic testing those pupils with speech problems that have direct effect on reading
2. To administer secondary tests to this population
3. To facilitate reading remediation by in-service instruction in the methods and materials of speech therapy
4. To isolate those children with developmental language lags and to initiate a morphology program to remediate the deficit
5. To provide in-service instruction in the methods and materials of language development
6. To isolate from initial auditory discrimination testing those children with auditory problems that have a direct effect on reading progress
7. To provide in-service training in the methods and materials for the development of auditory discrimination

C. Diagnostician – in-service teacher trainer – competency in curriculum development

SPECIFIC RESPONSIBILITIES

1. To evaluate the teachers' use of appropriate content and the skill sequences within that content
2. To assess whether the content scope and skill sequences are appropriate for the class

3. To isolate those children for whom scope and sequence are inappropriate because of interest, attitude, and emotional/social maturity
4. To assist the teacher to develop appropriate scopes and sequences for this population
5. To assess whether the level of teacher expectancy is appropriate for the child
6. To develop content scope and skill sequences for the remediation of those children with deficits in language development, visual-motor skills, auditory perceptual skills
7. To develop on-going test instruments in order to evaluate pupil progress and material effectiveness in each area of planned remediation

D. Diagnostician – in-service teacher trainer – competency in linguistics, and material development

SPECIFIC RESPONSIBILITIES

1. To establish and maintain a duality of language dialect by modifying teacher value judgments
2. To assess in verbal terms, through observation and teacher reflections, the departure from Standard English practice
3. To develop materials to improve the verbal patterns of those children using non-standard English
4. To present and demonstrate to the teacher a linguistic approach in learning grammar
5. To present and demonstrate to the teacher the methods and materials for remediation of verbal and intonational patterings
6. To develop the following morphological programs for the enrichment of vocabulary:
   a. roots, prefixes, suffixes
   b. inflectional endings
   c. syllabication (stress)

APPENDIX D

GROUP RESPONSIBILITIES OF PROJECT STAFF MEMBERS

The five members of the professional staff are responsible for the following areas and duties:

I. Testing

A. Test selection

Tests chosen for the 1968-69 academic year are:

1. Gates-MacGinitie (Test B forms 1 and 2 to entire school; tests C and/or D where required)
2. Diagnostic – homemade test which includes alphabet recognition, alphabet reproduction, alphabet sounds, consonant combinations, word families
3. Auditory discrimination
    a. Project made
    b. Wepman Test
4. Self-Ideal Test
5. Good Enough Draw-A-Man
6. Dolch 220-Basic Words Test

B. Test administration – each staff member will be responsible for administering tests in the classroom and individually on a one-to-one basis

C. Test scoring, interpretation, and diagnosis

D. Presentation of test data to Project teachers

E. Post testing again with whole battery

II. Teacher training

A. Each staff member will be assigned one or two teachers with whom he will work intensively, on a regular basis

B. Each staff member will discuss test scores with his teacher

C. The staff members will observe their respective classes to facilitate knowledge of reading problems of the pupils

D. Each staff member will brainstorm with his teacher for personalized instruction, sequencing, and materials for particular deficits and children

E. Staff members will propose remediation with their teachers

F. Demonstration of particular methods and materials in the teacher's classroom and privately

G. Evaluation of methods and materials proposed

H. Group meeting of total professional staff and six teachers once a month

I. Taxonomy instruction to be initiated when teachers are ready

III. Observation

A. Regular scheduled visits to respective teachers' classroom with observational sheets

B. Regular visits to control classrooms with observational sheets

C. Analysis of observations with project teachers

D. Evaluation of methods and materials used

E. For staff use, computation of amount of student time involved in learning

F. Feedback from teacher concerning correct-incorrect seatwork

IV. Materials

A. Knowledge and discussion of commercial materials available

1. Ordering of commercial materials and supplies
2. Staff orientation to new materials
3. Demonstration to Project teachers

B. Commercially Modified

1. Modifications needed
2. Production of modification
3. Feedback from teachers
4. Evaluation

C. Original Materials

1. Necessity
2. Goals
3. Production
4. Feedback
5. Evaluation

D. Staff Brainstorming
  1. Conception of Ideas
  2. Feasibility
  3. Production

E. Programmed Instruction (original)
  1. Units
    a. Language master
    b. Norelco filmstrip/recorder
    c. HPI individualized instruction
  2. Production
  3. Classroom demonstration and use
  4. Evaluation

F. Tape Program
  1. Necessity
  2. Goals
  3. Sequencing
  4. Production
  5. Testing or feedback

G. Retrieval Facilitation
  1. Ordering forms
  2. Cataloguing
  3. Evaluation of efficiency

APPENDIX E

TESTING PROGRAM (PRE AND POST)

Reading Ability Measurement

Name: Gates MacGinitie – B Form 1
Vocabulary and comprehension

How: Group – silent reading – verbal instructions by teacher
If the child falls within one year of the ceiling on any part of the first form, the next highest form is to be administered

Purpose: To obtain a measure of the child's functional reading level

Why: To measure progress
Good chance factor
Standardized
Equivalent forms
Wide range from floor to ceiling
Conforms to staff's needs to utilize taxonomical classifications

Phonics Ability Measurement – Phase One

Name: Diagnostic Reading Test – Part I

How: Group – an oral presentation by the teacher requiring motoric responses

Purpose: To measure ability fo form phoneme-grapheme associations from an auditory stimulus

Why: To measure progress through pre- and post-testing on instrument designed to obtain information for taxonomical purposes

Phonics Ability Measurement – Phase Two

Name: Diagnostic Reading Test – Part II

How: Individually – a visual presentation requiring oral responses

Purpose: To measure ability to discriminate the grapheme presented
To measure ability to form phoneme-grapheme associations from a visual stimulus

Why: An instrument designed to obtain information for taxonomical purposes

Purpose:	To obtain a description of the child's self-feelings To ascertain whether patterns of self-ideal affect academic progress
Why:	Recommended by Dr. Tannenbaum as a possible vehicle for ascertaining the relationship of attitudinal patterns to program effectiveness

Measurement of Classroom Habits

Name:	Levine-Tannenbaum Classroom Habit Scale
How:	Four-point questionnaire to be completed by the teacher
Purpose:	Teacher evaluation of individual pupil's classroom habits
Why:	Designed by Drs. Tannenbaum and Levine to ascertain nonacademic progress

Phonics Ability – Phase Three

Name: Diagnostic Reading Test – Part III

How: Group or individually – a visual presentation requiring motoric responses

Purpose: To measure ability to reproduce the graphemes, both upper case and lower case

Why: An instrument designed to obtain information for taxonomical purposes

Auditory Discrimination

Name: Wepman Test of Auditory Discrimination

How: Individually administered – an oral presentation requiring oral responses

Purpose: To measure ability to discriminate phonetic elements using an auditory input

Why: Standardized
An instrument to obtain information for taxonomical purposes

Sight Vocabulary

Name: Dolch Basic Sight Vocabulary Test

How: Individually administered – visual presentation requiring oral responses

Purpose: To measure sight vocabulary reservoir of child

Why: It represents the most frequently used words in the English language for which the child should possess quick retrieval

Intelligence

Name: Goodenough Draw-A-Man

How: Individually administered – directions presented orally by teacher

Purpose: To obtain an IQ measure

Why: Standardized
Fairly culture-fair
Ease of administration

Self-Ideal Measurement

Name: Measurement of Self-Ideal

How: Individually – tape administered requiring motoric responses

APPENDIX F

WORKSHEET: INITIAL POSITION SINGLE CONSONANT

Write your name and the date in the upper right-hand corner of your paper. Stop the tape recorder when you do this. Start the recorder when you are finished.

Now listen. . . . . the letter _____ in the word __________ has the sound of ______. The sound of _____ is written with the letter ______.

Now write the letter that makes up the sound of ______ on the blank line in the middle of the page. (5 minute interval).

You should have written ___________. Give yourself a check if this is your answer.

Remember the sound of ________ is made with the letter ______.

Now listen carefully. I am going to say some words. Some of them will begin with the sound of _____ When they do, write the letter _____. If the words do not begin with the sound of _____, draw a line next to that number. Now listen . . . . .

The first word is ________ (5 minute interval). Give yourself a check if you wrote __________, because the word _________ begins with the sound of ______. The sound of _____ is made with the letter ______.

Number 2: _________ (5 minute interval). Give yourself a check if you drew a line next to this number. The word _________ begins with the sound of _____ and you are listening for the sound of _____, which is made with a ______. Now you will do the rest by yourself. Listen carefully . . . . .

3. ____________________
4. ____________________
5. ____________________
6. ____________________
7. ____________________
8. ____________________
9. ____________________
10. ____________________
11. ____________________
12. ____________________
13. ____________________
14. ____________________
15. ____________________
16. ____________________
17. ____________________
18. ____________________
19. ____________________
20. ____________________

Now let us go over the work you have just done. Start with your third answer.

#3 The word was __________. __________ and __________ are not the same sounds. The word ______ begins with a different letter. Give yourself a check if you left the line blank.

#4 The word was __________. Give yourself a check if you wrote the letter. __________ begins with the sound of ______.

#5 The word was ________. You should have written __________.

6 The word was __________ . __________ begins with a different sound. Give yourself a check if you drew a line next to this number

7 The word was __________ . You should have written __________ .

8 The word was __________ . Give yourself a check if you wrote the letter __________ .

9 The word was __________ . __________ begins with the sound of ________ . You should have written a __________ .

#10 The word was __________ . You should have written __________ .

#11 The word was __________ . You should have a line next to this number.

#12 The word was __________ . Give yourself a check if your answer is __________ .

#13 The word was __________ . You should have written __________ .

#14 The word was __________ . You should have a line next to this number.

#15 The word was __________ . Do you have a __________ as your answer? Then give yourself a check.

#16 The word was __________ . The correct answer is __________ .

#17 The word was __________ . A __________ is correct.

#18 The word was __________ . You should have a line next to this number.

#19 The word was __________ . The answer is a __________ .

#20 The word was __________ . You should have a line next to this number.

APPENDIX G
COMPOSITE LESSON PLAN

George
Student's Name

7th
Grade

H.D.
Teacher

Vocab. 3.3 Comp. 4.0
Reading Level

1/69 to 4/69
Date

		CONTENT			STRATEGY				
Item Number	Date	Basic Skills	Basic Subskills	Seq. Level	Inst. Method	Inst. Mode	Comm. Input	Comm. Output	TEACHER COMMENTS
1	1/69	2	2	2	3	4	4	2	George worked well with me on a one-to-one basis.
2	1/69	2	4	3	7	3	1	3	George handled the material well as expected when working by himself.
3	2/69	3	3	3	2	1	4	4	I moved George into a small group too quickly.
4	2/69	3	5	2	1	5	1	2	I am now positive that George is not ready to work in groups.
5	3/69	3	2	3	6	2	4	2	Experimented by putting George in a Student-Student setting but this may be the only child with whom George can work.
6	3/69	3	7	4	7	5	1	1	George can handle any basic skill when working by himself.
7	4/69	4	2	3	6	4	2	4	George worked so well in a Student-Student group that we plan to add another child.
8	4/69	4	4	2	7	5	1	4	George had limited success in a Small-Group setting. Therefore, we have used an Individualized Self-Instruction setting.

APPENDIX H
COMPOSITE LESSON PLAN

Andy
Student's Name

5th
Grade

H.S.
Teacher

Vocab. 1.4 Comp. No Score
Reading Level

1/69 to 4/69
Date

		CONTENT			STRATEGY				
Item Number	Date	Basic Skills	Basic Subskills	Seq. Level	Inst. Method	Inst. Mode	Comm. Input	Comm. Output	TEACHER COMMENTS
1	1/69	1	1	1	3	4	1	2	Both content and strategy were successful.
2	1/69	1	3	1	7	5	4	3	Instructional Method and Mode were poor selections for Andy as he does not function at the academic level required for this method and mode.
3	2/69	1	2	1	3	6	2	2	This is more like it.
4	2/69	2	1	1	3	6	4	4	Andy's auditory memory is poor. These exercises were successful and will be continued.
5	3/69	2	2	1	3	4	1	2	Moved from the use of two-channel input to one-channel input in order to focus on visual perception.
6	3/69	2	3	1	2	1	4	4	This is a beginning step to develop a Sight Vocabulary.
7	4/69	3	1	1	1	4	2	2	A strategy used to integrate Andy into the total group.
8	4/69	3	4	1	2	4	4	4	The combination of a new content with a dual input was too ambitious for Andy.

APPENDIX I
COMPOSITE LESSON PLAN

Edward
Student's Name

5th
Grade

H.S.
Teacher

Vocab. 1.3 Comp. 1.6
Reading Level

1/69 to 4/69
Date

		CONTENT			STRATEGY				
Item Number	Date	Basic Skills	Basic Subskill	Seq. Level	Inst. Method	Inst. Mode	Comm. Input	Comm. Output	TEACHER COMMENTS
1	1/69	1	1	1	2	2	1	3	Edward is withdrawn and play-competition did not help to make him more open.
2	1/69	1	5	1	6	5	1	4	Exploration seemed to be a poor mode for Edward. It may require a level of cognitive-perceptual development Edward has not reached. Also withdrawnness and exploration appear to be a poor match.
3	2/69	1	3	1	2	4	4	3	Directionality-Laterality chosen because of Edward's difficulty with the letter sequence in words. 2443 is the best strategy combination for Edward. The small group setting did not overwhelm him and he was
									more responsive than in other group settings. He seemed to be able to cope with test-response as the instructional mode better than the other modes. A-V input produced better results than either A or V alone.
4	2/69	2	1	1	6	4	4	3	Student-student setting with Andy was good. Andy is functioning at a lower academic level than Edward, and Edward helped John voluntarily.
5	3/69	2	2	1	1	6	2	3	Edward was unresponsive because of the total group setting. He offered no responses voluntarily and needed to be called on. Programmed Response as the Instruction Mode seemed as effective as Test-
									Response. Edward enjoyed use of earphones and tape recorder.
6	3/69	3	1	1	1	4	2	2	No improvement in Edward's performance in Total Group setting.
7	4/69	3	4	1	2	3	4	2	Some improvement in Edward's involvement with the task in a game mode.
8	4/69	4	7	1	1	5	2	1	Edward's difficulties in a Total Group setting with Exploration as the Instructional Mode were counterbalanced by the material and the "No Response" requirement of the task.

First Report

Project No. 7-1295
Project No. 422273
Grant No. OEG-1-6-062528-2093
Grant No. OEG-08-071295-4399 (032)

THE TAXONOMIC INSTRUCTION PROJECT

A Manual of Principles and Practices Pertaining to the Content of Instruction

December, 1969

Research and Demonstration Center
for the Education of Handicapped Children
Teachers College, Columbia University
New York, New York

United States Department of
Health Education and Welfare
Office of Education
Bureau of Research

ADDENDUM

FIRST REPORT

THE TAXONOMIC INSTRUCTION PROJECT

A Manual of Principles and Practices Pertaining to the Content of Instruction

Research and Demonstration Center
for the Education of Handicapped Children
Teachers College, Columbia University
New York, New York

December, 1969

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ADDENDUM TO ACKNOWLEDGEMENTS PAGE

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This First Report, THE TAXONOMIC INSTRUCTION PROJECT: A Manual of Principles and Practices Pertaining to the Content of Instruction, is intended primarily for the United States Office of Education, the faculty and staff of the Research and Demonstration Center for the Education of Handicapped Children, and selected individuals at the discretion of the authors. The materials contained herein are not intended for public release.

Reprinted with the permission of the publisher:

Dolch Basic Sight Word Test, Part I (Edward W. Dolch Ph.D., Champaign,Illinois: Garrard Publishing Company), 1942

The Gates MacGinitie Reading Tests (New York: Teachers College Press), 1964

Extracts of Anglo-Saxon and Latin Affixes and Suffixes by Josephine Rudd, Word Attack Manual (Cambridge, Mass.: Educator's Publishing Service, Inc.), 1961

Wepman Auditory Discrimination Test Form I, (Joseph H. Wepman, Ph.D., Chicago, Illinois), 1958

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The above listing of Facsimile pages replaces the listing on pp. ii and iii, bound copy, in which the pages upon which the reproductions appear were omitted.

Diagnostic Analysis Chart for Pupil A

CONTENT			STRATEGY				Student's Name: Pupil A Grade Teacher Reading Level Date
Basic Skills	Basic Subskills	Seq. Level	Inst. Method	Inst. Mode	Comm. Input	Comm. Output	TEACHER COMMENTS
2	3	1	2,7	1,3	1,2 3	2	

Author's correction: above chart replaces Diagnostic Analysis Chart, bound copy, "Introduction" by Abraham J. Tannenbaum, p. x.

Addendum: pages 80, 81, 82

The meanings and examples of Anglo Saxon and Latin Affixes and Suffixes from the Word Attack Manual (see permission acknowledgements page).

Two lists of prefixes and suffixes (one from Old English, the other from Latin) are to be found in the *Word Attack Manual* by Josephine Rudd.* Together these lists comprise the prefixes and suffixes that are most frequently combined with root words to form much of our multisyllabic vocabulary. Each affix (prefix or suffix) usually has more than one meaning; the meanings and explanations assigned in the Rudd lists are the most common ones.

B. Anglo Saxon Affixes

1. Prefixes

Prefix	Meaning	Examples
a-	in, on, at	ashore, afire, asleep
for-	away, against	forget, forgive, forbid
fore-	before, ahead	forenoon, foretell, forecast
in-	in, into	income, inland, invest
mis-	wrong, wrongly	misspell, mislead, mistake
out-	beyond, outside	outgrow, outlaw, outcast
un-	not	uncertain, unfriendly, unfold
under-	below	underbid, underrate, underlying

2. Suffixes

Suffix	Meaning	Examples
To form nouns:		
-or	one who or that which	player, writer, drummer, heater, rocker, lighter
-ness	quality of	greatness, goodness, kindness
-hood	state of	manhood, falsehood, livelihood
To form adjectives:		
-en	made of, like	golden, wooden, silken
-er	more	larger, older, longer
-ful	full of	hopeful, peaceful, beautiful
-ish	somewhat	boyish, greenish, sickish

---

*Rudd, Josephine. Word Attack Manual. Cambridge, Mass., Educators Publishing Service, 1961.

-less	without	homeless, lifeless, blameless
-ly	like	friendly, manly, fatherly
-some	inclined to	troublesome, tiresome, lonesome
-y	marked by	rainy. guilty, mighty

To form adverbs:

-ly	how, when to what extent	He reads *slowly*. He spoke *recently*. He travels *widely*.

C. Latin Affixes

1. Prefixes

Prefix	Meaning	Examples
a, ab	away from	avert, absent, abnormal
ad, (ac, af, ag, al, an, ap, ar, as, at)	to, towards	adhere, accept, appoint, arrive, assist, attract.
ante	before	ante (in a card game) anteroom, antecedent
bene	well, good	benefit
bi	two	bicycle
con (cor, com, col, co)	with, together	connect, collect, combine, coincide
contra (counter)	against, opposite	contradict, countermaid
de	down, from	descend, depart
dis (dif, di)	apart	dissolve, dissect
e, ex (ef)	out of	eject, exit, effort
in (im, ir, il)	not	insecure, immature, irregular, illegal
mal	bad	maladjusted, malnutrition
ob (oc, of, op)	against	object, offense, oppose
per	through	percolate, persist, perspire
post	after	postwar, postscript
pre	before	prepare, predict precede
pro	for, forward	pronoun, proceed
re	back, again	recall, renew, repeat
sub (suc, suf, sug, sup, sus)	under	subordinate, suffer, suggest, support, suspect
super (sur)	above	superstructure, superman, surplus surface

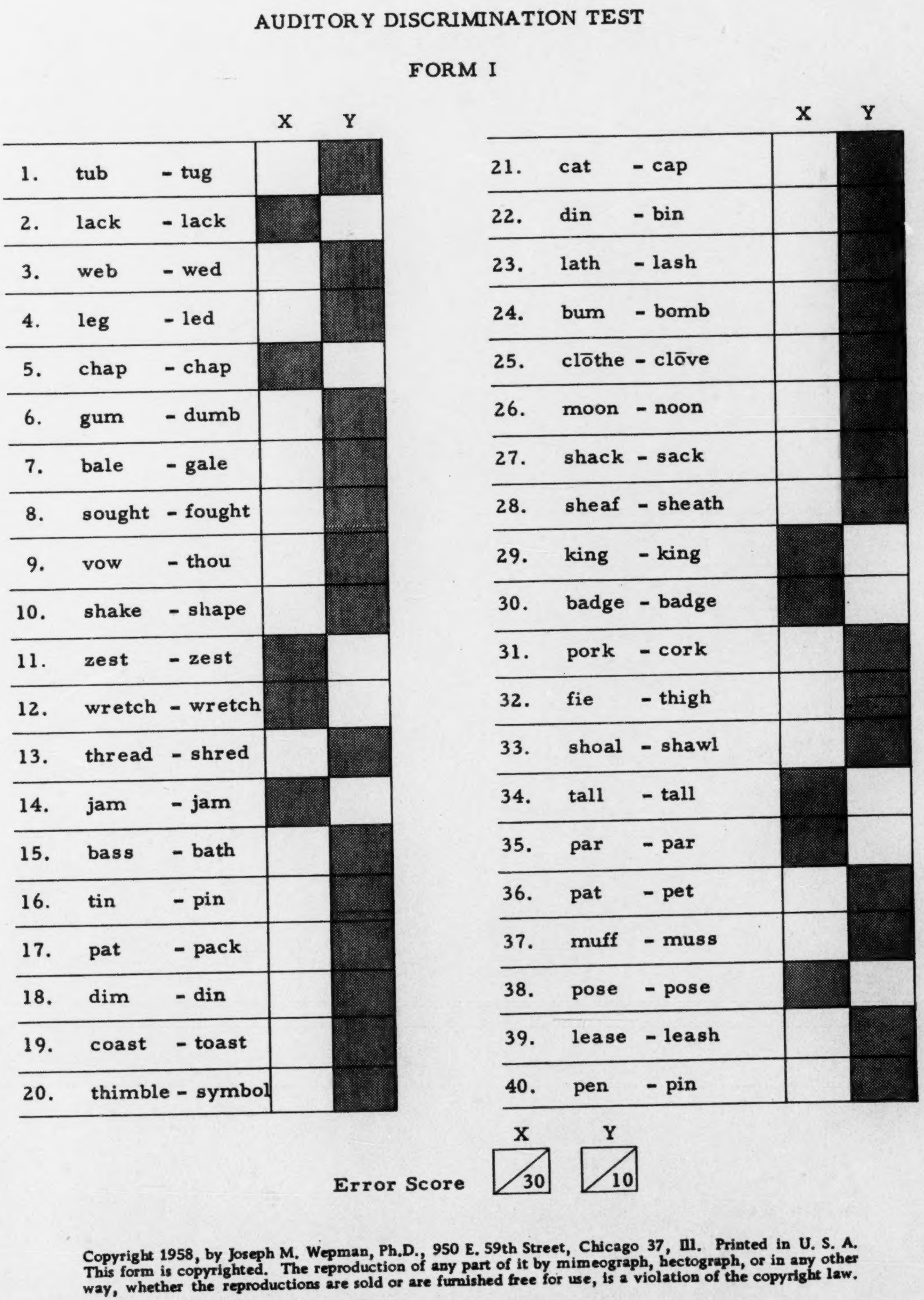
NOTE: Particular attention should be paid to the spelling variations listed in parenthesis of some of the prefixes – – ad, con, contra, dis, e, in, ob, sub, super. Use of the spelling variations is determined by the initial sound of the root to which the prefix is attached. The change in the prefix facilitates pronunciation of the word.

ad-dict but ac-cord
ad-dend but af-flict
ad-dress but ap-pear

2. Suffixes

Suffix	Meaning	Examples
To form nouns		
-ar		scholar, beggar
-or	one who	actor, inventor
-an, -ian		American, musician
-ant, -ent		servant, student
-ance, -ence		resistance, independence
-ancy, ency	state of	brilliancy, agency
-ty, -ity	or	liberty, purity
-ment	act of	amusement
-(t)ion, -(s) ion		motion, confusion
-ary, -ory	place where	library, factory
To form adjectives		
-able, -ible	able to be	readable, visible
-al	referring to	legal, normal
-ic	like	heroic, comic
-ive	inclined to	attractive, corrective
-ous	full of	mysterious, furious
To form verbs		
-ate		elevate
-fy	to make	magnify
-ize (Greek)		dramatize

(continue text, bound copy page 82)



AUDITORY DISCRIMINATION TEST

FORM I

		X	Y
1.	tub - tug		▨
2.	lack - lack	▨	
3.	web - wed		▨
4.	leg - led		▨
5.	chap - chap	▨	
6.	gum - dumb		▨
7.	bale - gale		▨
8.	sought - fought		▨
9.	vow - thou		▨
10.	shake - shape		▨
11.	zest - zest	▨	
12.	wretch - wretch	▨	
13.	thread - shred		▨
14.	jam - jam	▨	
15.	bass - bath		▨
16.	tin - pin		▨
17.	pat - pack		▨
18.	dim - din		▨
19.	coast - toast		▨
20.	thimble - symbol		▨
21.	cat - cap		▨
22.	din - bin		▨
23.	lath - lash		▨
24.	bum - bomb		▨
25.	clōthe - clōve		▨
26.	moon - noon		▨
27.	shack - sack		▨
28.	sheaf - sheath		▨
29.	king - king	▨	
30.	badge - badge	▨	
31.	pork - cork		▨
32.	fie - thigh		▨
33.	shoal - shawl		▨
34.	tall - tall	▨	
35.	par - par	▨	
36.	pat - pet		▨
37.	muff - muss		▨
38.	pose - pose	▨	
39.	lease - leash		▨
40.	pen - pin		▨

	X	Y
Error Score	/30	/10

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Facsimile of Transparency # 27

THE BASIC SIGHT WORD TEST. PART 1.

Name.. **Date**..

1. by at a it
2. in I be big
3. did good do go
4. all are any an
5. had have him drink
6. its is into if
7. ask may as am
8. many cut keep know
9. does goes going and
10. has he his far
11. but jump just buy
12. black kind blue find
13. fast first ate eat
14. help hot both hold
15. brown grow bring green
16. four every found eight
17. from make for made
18. around funny always because
19. long let little look
20. away again after about
21. cold can could clean
22. full fall five fly
23. before best better been
24. live like laugh light
25. her here how hurt
26. down done draw don't
27. give get gave got
28. came carry call come

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The Basic Sight Word Test on the Basic Sight Vocabulary (Edward Dolch Ph.D., Champaign Illinois: Garrard Publishing Company), 1942

Facsimile of Transparency #31